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HQ US ARMY MATERIEL COMMAND PAMPHLET	AMC- P 715-5
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DEFENSE LOGISTICS AGENCY HANDBOOK	DLAH 8400.2
DEFENSE CONTRACT AUDIT AGENCY PAMPHLET	DCAA P7641.47

COST/SCHEDULE CONTROL SYSTEMS CRITERIA JOINT IMPLEMENTATION GUIDE

1 OCTOBER 1987

DEPARTMENTS OF THE AIR FORCE, THE ARMY, THE NAVY,
THE DEFENSE LOGISTICS AGENCY, AND THE DEFENSE CONTRACT AUDIT AGENCY

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(Shipbuilding & Logistics)

James J. Singsank, Colonel, USA
Staff Director, Administration
Defense Logistics Agency

William H. Reed
Director
Defense Contract Audit Agency

SUMMARY OF CHANGES

This revision achieves consistency with the current DoDI 7000.2, incorporates the Performance Measurement Joint Executive Group's Supplemental Guidance, updates organization names and document numbers, amplifies procedures for conducting extended subsequent application reviews and baseline reviews.

DEPARTMENTS OF THE AIR FORCE, THE ARMY, THE NAVY
THE DEFENSE LOGISTICS AGENCY, AND THE DEFENSE CONTRACT AUDIT AGENCY

Headquarters Air Force Systems Command Andrews Air Force Base, DC 20334-5000	AFSC PAMPHLET 173-5
Headquarters Air Force Communications Command Scott Air Force Base, IL 62225-5280	AFCC PAMPHLET 173-5
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Headquarters Army Materiel Command Alexandria VA 22333-0001	AMC PAMPHLET 715-5
Assistant Secretary of the Navy (S&L) Washington DC 20360-5000	NAVSO PAMPHLET 3627
Headquarters Defense Logistics Agency Cameron Station, Alexandria VA 22314-6100	DLA HANDBOOK 8400.2
Headquarters Defense Contract Audit Agency Cameron Station, Alexandria VA 22304-6178	DCAA PAMPHLET 7641.47 **1 OCTOBER 1987**

COST/SCHEDULE CONTROL SYSTEMS CRITERIA
JOINT IMPLEMENTATION GUIDE
for
DOD INSTRUCTION 7000.2, "Performance Measurement for Selected Acquisitions"

Purpose: This guide provides the uniform procedures which have been approved by AFSC, AFCC, AFLC, AMC, ASN(S&L), DLA, and DCAA during planning and implementation of the DoD Cost/Schedule Control Systems Criteria (C/SCSC) and for surveillance of contractor compliance. Users of this guide are encouraged to submit recommendations for refined procedures, through channels, to appropriate DoD component focal points.

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Supersedes AFSCP/AFLCP 173-5, DARCOM-P715-5, NAVMAT P5240, DLAH 8315.2, 1 Oct 1980. (See signature page for summary of changes.)

OPR: AFSC/ACC
AFCC/ACC
AFLC/ACC
AMC/AMCRM-K
ASN (S&L)/CBM
DLA/AE
DCAA/OPD

Distribution: See inside back cover.

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THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

10 July 1986

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
UNDERSECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING
ASSISTANT SECRETARY OF DEFENSE (ACQUISITION AND LOGISTICS)
COMMANDANT, DEFENSE SYSTEMS MANAGEMENT COLLEGE

SUBJECT: Cost/Schedule Control Systems Criteria (C/SCSC)

A survey conducted for the Assistant Secretary of Defense (Comptroller) on C/SCSC implementation within DoD and industry revealed an inadequate understanding of C/SCSC and Cost Performance Reports (CPR) by people who do not have day-to-day involvement in those areas. The survey report recommended that a "white paper" be prepared, addressed both to government and contractor program managers and their higher level managers.

Survey findings overwhelmingly endorsed C/SCSC as a valid concept and approach to controlling contract performance. When dissatisfaction was expressed, it almost universally was based on expectations that C/SCSC could provide information it was never designed or expected to produce, or on requirements for excessive reporting detail. Consequently, substantial emphasis was placed on clarifying the objectives and purpose of C/SCSC, and on the need for improving understanding between government and industry.

A copy of the paper is attached. It is intended to achieve better understanding of the different purposes and needs of DoD and its contractors relative to C/SCSC, and of what C/SCSC and the associated CPRs can and cannot do. The paper will be included as a preface in an upcoming revision to the C/SCSC Joint Implementation Guide. Please distribute the paper widely, including all current and future programs with contracts subject to C/SCSC, their contractors, and Defense schools with acquisition management curricula.

WHT

William H. Taft, IV

Attachment

PREFACE

C/SCSC WHITE PAPER

INTRODUCTION. DoD Instruction 7000.2, "Performance Measurement for Selected Acquisitions," first issued in 1967, requires that on major contracts, contractors use management control systems meeting the Cost/Schedule Control Systems Criteria (C/SCSC or CS^2). C/SCSC can be controversial. While many experienced program and business managers in both government and industry are sold on its benefits, other equally experienced managers consider it a burdensome requirement that generates excessive data. This paper summarizes the objectives of C/SCSC and the associated cost performance reports, and what can and cannot be expected from their use.

C/SCSC OBJECTIVES AND PURPOSE.

The objectives of C/SCSC are:

- For contractors to use effective internal cost and schedule management control systems, and
- For the Government to be able to rely on timely and auditable data produced by those systems for determining product-oriented contract status.

Both objectives are essential. However, Government managers should recognize that effective contractor management does not in itself require product-oriented cost reporting in addition to cost reporting by contractor organization. On the other hand, contractors should recognize the Government's need for such information on contracts that involve substantial cost risk to the Government. Differences arising from these divergent needs, such as the level of reporting detail required, should be discussed during contract negotiations. The criteria are not subject to negotiation, but many problems concerning timing of C/SCSC implementation and reporting requirements can be avoided or minimized through negotiation.

C/SCSC is not a system! It is a set of criteria designed to define an adequate contractor cost and schedule management control system. Changes to an existing system are required only to the extent that the system does not meet the criteria. The criteria do not purport to address all of a contractor's needs for day-to-day or week-to-week internal control, such as informal communications, internal status reports, reviews, and similar management tools. These management tools are important and are not intended to be replaced by C/SCSC requirements. The basic purpose is to assure that the contractor has in place, and uses, adequate cost and schedule control systems providing reliable contract status at least monthly.

C/SCSC REQUIREMENTS. C/SCSC improves on the budget vs. actuals (or "spend plan") management technique by requiring that actual work progress be quantified through "earned value," an objective measure of how much work has been accomplished on the contract. Without earned value, one can only compare how much has been spent with what was planned to be spent, with no objective indication of how much of the planned work was actually accomplished. C/SCSC require the contractor to plan, budget, and schedule authorized effort in time-phased "planned value" increments constituting a performance measurement baseline (time-phased budget). As work is accomplished, it is "earned" on the same budget dollar basis. Earned value compared with planned value provides a measure of work accomplishment against plan, called a schedule variance.

The contractor's accounting systems provide accumulation of actual cost of accomplished work, which is compared with earned value, providing a cost variance for the accomplished work and indicating whether the work is over, or underrunning its plan. Planned value, earned value, and actual cost data provide an objective measure of performance, enabling trend analysis and evaluation of cost estimates at completion at all levels of the contract.

In addition to earned value, C/SCSC requires thorough planning, baseline establishment and control, information broken down by product as well as by organization or function, measurement of accomplishment against the plan at relatively low levels with summarized reporting to higher management, reporting discipline, variance analysis, and corrective action. These are all desirable features of a good management control system.

C/SCSC requirements have been overwhelmingly acknowledged by both Government and industry managers as representing good management principles. The extent of effort needed for a contractor to meet these requirements depends on how much change, if any, is needed for the existing systems to meet the criteria.

BASELINE IMPLEMENTATION. An initial and critical contractor step in applying C/SCSC to a contract is establishing the baseline for performance measurement. ***The work involved in establishing a baseline may be substantial, but must not be avoided or delayed because valid cost data depend on it. It should be planned during the proposal phase and completed as soon as possible after contract award.***

When the contract is awarded, internal documentation must be updated and work planned in detail. Work authorizations, schedules, and budgets must be negotiated between the contractor program office and the various functional organizations and managers who are responsible for accomplishing the work. This process can be time-consuming, but is necessary to develop a baseline that is meaningful for internal control. Some additional time also may be needed to verify the data produced after the baseline is negotiated. ***The time required by the contractor to complete these tasks and be prepared to demonstrate compliance with C/SCSC may be negotiated if it is likely to exceed the time specified in the standard C/SCSC contract clause.***

The desired result is a timely, well planned and realistic baseline for controlling internal performance and for reporting valid contract status information to the Government.

RELATIONSHIP TO CONTRACTUAL SCHEDULES. The C/SCSC performance measurement baseline represents the contractor's internal work plan, the dollarized schedule for performing the contract effort, and may allow a "cushion" with respect to the contract delivery schedules. These cushion (or "setback") schedules anticipate typical problems such as late vendor deliveries and rework. If not understood, setback schedules can cause confusion because a negative schedule variance would not affect contract deliveries if the cushion can absorb the delay.

A C/SCSC schedule variance is stated in terms of dollars' worth of work and must be analyzed in conjunction with other schedule information such as provided by networks, Gantt charts, and line-of-balance. By itself, the C/SCSC schedule variance reveals no "critical path" information, and may be misleading because unfavorable accomplishment in some areas can be offset by favorable accomplishment in others. ***A C/SCSC schedule variance is an "accomplishment variance" that provides an early indicator of cost problems when it shows the contractor is not meeting the internal work plan.*** Further analysis must be performed to determine the effect on contract cost and schedule

MANAGEMENT SYSTEM ACCEPTANCE. Contractors are required to demonstrate to the Government that their cost and schedule management control systems comply with the criteria. A comprehensive demonstration review is required once for R&D effort and once for production; shorter subsequent application reviews (SARs) are conducted for follow-on contracts requiring compliance with C/SCSC ***Because the criteria approach permits a wide variety of equally effective ways for contractors to meet the criteria, trained, experienced Government people are used to conduct the reviews and follow-on surveillance. Similarly, contractors need skilled people to develop, maintain, and monitor their systems.***

C/SCSC review reports are usually coordinated among the Military Departments, resulting in triservice acceptance (or "validation") of contractors' systems. Along with frequent meetings of the DoD component C/SCSC focal points, this coordination helps to ensure uniform criteria interpretations.

REPORTING. There are no explicit external reporting requirements in the C/SCSC. The criteria require that contractors have and use effective internal control systems. ***Summary data from the internal system are reported to the Government through the Cost Performance Report (CPR), as specified on the Contract Data Requirements List.*** The CPR has five formats, which provide cost and schedule performance data broken down both by product (work breakdown structure) and by contractor functional organizations; baseline information; planned vs. actual manpower usage; and

problem analysis. The problem analysis section is also used to reconcile the dollar-based CPR schedule information and actual time-based schedules.

The CPR is almost always submitted monthly, and is intended to report summary information from the contractor's internal cost and schedule control system. ***Summary reporting suffices because C/SCSC discipline assures that the contractor uses objective performance measurement information to manage at levels where work is performed, allowing management attention to be directed to areas where significant problems are indicated.*** When a problem area surfaces in a CPR, detailed data may be requested until the problem is resolved. It is important to recognize that CPR frequency, reporting levels, variance analysis thresholds, and formats are all subject to negotiation, and any needed adjustments in these areas may be proposed by either party during contract execution.

In addition to earned value, two important CPR data elements are the estimated cost at completion (EAC) and management reserve. ***The EAC is of prime interest and must be updated periodically by the contractor using approved procedures,*** including evaluation of cost and schedule variance trends along with information from other management tools. ***Management reserve is an amount of the contract budget set aside by the contractor for management control purposes,*** such as for use in performing unanticipated tasks that are within the scope of the contract. It is not a contingency fund, and may neither be eliminated from contract prices by the Government during subsequent negotiations nor used to absorb the cost of contract changes.

CPR TIMELINESS. Typically, the CPR is submitted about 25 days after the close of the contractor's accounting month. That time is needed to accumulate, verify and correct data, analyze significant variances, and prepare reports. Although 25 days may appear excessive to some recipients, ***the CPR is timely for its intended purposes -- to provide an objective indication of contract status, a basis for observing trends, and formal communication between contractor and Government managers.*** Negotiation with the contractor may result in shorter submission time, using such techniques as submitting the data first and analysis later, or substituting contractor internal formats provided they contain adequate data in a form suitable for use by Government managers.

USE OF CPR. The CPR, like C/SCSC, is no substitute for day-to-day contract management or communication between the contractor and the Government program manager. ***The CPR may not reveal many new problems, but within the Government program office it is valuable for confirming and quantifying the problems reported by the contractor's functional managers.*** For example, a CPR would confirm a previously anticipated schedule slippage or previously known technical problem, allowing analysis of the effect on current and future contract cost and schedule.

Government program offices also use CPRs to monitor cost and schedule variance trends and to project the trends to contract completion to determine the validity of EACs and completion dates. In addition, CPRs are used to correlate contract cost performance with program financial planning by verifying funding requirements identified by contractors on the Contract Funds Status Report.

Above the Government program office level, CPRs are used as the basis for various management oversight reports. CPRs are not provided routinely above the major command level in the Military Departments, but data summarized from the CPRs are used in periodic program status reports to higher headquarters including the Office of the Secretary of Defense (OSD), and Congress. ***This high-level interest reflects awareness that it is necessary to assess whether overall program schedules and budgets are reasonable.*** Graphic portrayal of CPR data from contractor systems accepted under C/SCSC is a key feature of the Military Department and OSD reporting systems.

C/SCSC IMPLEMENTATION PROBLEMS. Typical points of contention between the Government and industry concerning C/SCSC implementation include time required to implement, levels designated for management and reporting, variance analysis thresholds, and system discipline requirements. These are not a direct result of the criteria, but can affect the cost of implementing and operating a C/SCSC compliant management system. The cost of C/SCSC, sometimes perceived to be excessive, has defied quantification because it is virtually impossible to

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separate the incremental C/SCSC cost from the management cost that would be incurred in any case. However, there is no dispute that improper implementation imposes an unnecessary burden on the contractor.

Reasons for improper implementation include overreaction to C/SCSC and CPR requirements by contractors as well as excessive Government contractual and review requirements. In most cases, improved communication can correct these problems. Government C/SCSC specialists should review solicitations for appropriate work breakdown structure, C/SCSC, and cost performance reporting requirements. Contract negotiations should include discussion of implementation schedules, reporting levels, and variance analysis thresholds. When a contractor believes changes are necessary, they should be brought to the procuring agency's attention. After contract award, certain revisions can also be made. For example, variance analysis thresholds may be adjusted if they generate too much problem analysis narrative.

When a contractor has a C/SCSC implementation problem and is unable to resolve it with the procuring agency, an appeal may be made to the DoD component C/SCSC focal point. Failing resolution at that level, further appeal to the Performance Measurement Joint Executive Group is possible.

COST/SCHEDULE STATUS REPORT. On smaller contracts that do not require the contractor to comply with C/SCSC, the Cost/Schedule Status Report (C/SSR) approach to performance measurement may be used. ***The C/SSR is similar to the first format of the CPR, and like the CPR has a narrative problem analysis section, but the data required are not as extensive and the contractor is not subject to the in-depth demonstration reviews or management system acceptance associated with C/SCSC.*** The manner in which C/SSR data are generated is subject to negotiation and inclusion as part of the contract.

The C/SSR may be required as an alternative on large contracts for which C/SCSC compliance is not considered mandatory. In this case, the DoD component may conduct a more detailed C/SSR review, but the administrative and reporting effort both for Government and the contractor is less than with C/SCSC or CPR requirements.

CONCLUSION. ***C/SCSC provide the best tool available to assure that contractors have and use adequate cost and schedule management control systems.*** They provide better overall planning and control discipline on defense contracts. The associated Cost Performance Report summarizes objective data from contractors' internal systems for contractor and Government managers. The C/SCSC and CPR requirements have proved their value over many years. ***Real improvements in contract management can be achieved by top-level attention to developing and using good cost and schedule management control systems and by taking timely corrective action when a problem is identified.*** Problems are corrected by management decisions. A C/SCSC-compliant system can ensure that valid cost and schedule performance data are generated, easing the manager's task in making the correct decision.

Chapter I

INTRODUCTION

1-1. Purpose:

a. Uniform Guidance. This pamphlet provides uniform guidance for the military departments and other Defense agencies (hereafter referred to as DoD components) responsible for implementation of the Cost/Schedule Control Systems Criteria (C/SCSC) consistent with the provisions of DoD Instruction 7000.2, Performance Measurement for Selected Acquisitions. Contents were developed jointly by AFSC, AFCC, AFLC, AMC, ASN(S&L), DCAA, and DLA. Within this guide the term "criteria" is synonymous with "C/SCSC." The term "performance" means "cost/schedule performance." Procedural guidance for surveillance of Cost/Schedule Control Systems is provided in the C/SCSC Joint Surveillance Guide (AMC-P 715-10, NAVMAT P5243, AFLC/AFSC P173-6, DLAH 8315.1, and DCAA P7641.46).

b. Implementation:

(1) Uniform implementation of the criteria consistent with this guidance will avoid imposing multiple cost and schedule systems on contractors. When management control systems acceptable to both the contractor and DoD components are applied to Defense contracts at a given contractor's facility, the systems will provide a common source of information required by all management levels of the Government and the contractor. Supplemental instructions issued by individual DoD components to provide additional guidance will be consistent with this pamphlet.

(2) The criteria are intended to be general, to permit their use in evaluating contractors' management control systems for development, construction, and production contracts. Since these types of contracts tend to differ significantly, it is impossible to provide detailed guidance which will apply specifically in all cases. Users of the criteria should be alert for areas in which distinctions in detailed interpretations seem appropriate or reasonable, whether or not they are specifically identified. Use of the criteria must be based on common sense, which means that the interpretations must be practical as well as sensitive to the overall requirements for performance measurement.

c. Assistance to Users. These procedures provide a basis to assist--

(1) DoD managers in assessing the acceptability of contractors' systems in response to the criteria.

(2) Contractors in understanding and responding to the criteria.

1-2. Background:

a. Management Needs. A fundamental responsibility in the acquisition and modification of major systems is to ensure that visibility of contractors' progress is sufficient for management purposes. In carrying out this responsibility in selected contracts within applicable Defense programs, DoD receives and reviews cost and schedule performance data. These data must--

(1) relate time-phased budgets to specific contract tasks and/or statements of work;

(2) indicate work progress;

(3) properly relate cost, schedule and technical accomplishment;

(4) be valid, timely, and auditable;

(5) supply DoD managers with information at a practical level of summarization; and

(6) be derived from the same internal management control systems used by the contractor to manage the contract.

b. Criteria Concept. No single set of management control systems will meet every DoD and contractor management data need for performance measurement. Due to variations in organizations, products, and working relationships, it is not feasible to prescribe a universal system for cost and schedule controls. DoD has adopted an approach which simply defines the criteria that contractors' management control systems must meet. The criteria provide the basis for determining whether contractors' management control systems are acceptable.

(1) The responsibility for developing and applying the specific procedures for complying with these criteria is vested in the contractors. The specific management control systems they propose are subject to DoD acceptance. In instances where the contractors' systems do not meet the criteria, adjustments necessary to achieve compliance will be required by the procuring activity.

(2) By applying criteria, rather than specific DoD prescribed management control systems, contractors have the latitude and flexibility for meeting their unique management needs. This approach allows contractors to use existing management control systems or other systems of their choice, provided they meet the criteria.

(3) When the solicitation document (request for proposal, request for quotation, and the like) specifies application of the criteria, an element in the evaluation of proposals will be the prospective contractor's proposed systems for planning and controlling contract performance. The prospective contractor will describe the systems to be used in sufficient detail to permit their evaluation for compliance with the criteria (appendix A).

(4) Upon award of the contract, the contractor will be required to have a comprehensive description of the management control systems and to demonstrate to a Government C/SCSC review team their effective application in planning and controlling the work under

Typical C/SCSC Action Items (See Chapter 5)	ACTION AGENCY	
	DoD	Contractor
1. Criteria specified in solicitation (DFARS Clause)	X	
2. Description of system submitted in proposals.		X
3. Evaluation of system description in proposals.	X	
4. Source Selection Evaluation Board (SSEB) considers findings of evaluation review.	X	
5. Criteria requirement in contract (DFARS Clause)	X	
6. C/SCSC Review Team is organized.	X	
7. Implementation visit/readiness assessment.	X	X
8. Demonstrates management control systems.		X
9. Determines compliance.[1]	X	
10. Official acceptance.[2]	X	
11. Continuous surveillance.[2]	X	
12. Continuous operation of systems meeting criteria.		X

NOTES: 1. After contractor corrects any deficiencies the DoD team reexamines those areas.
2. Demonstration may be required for major changes after acceptance.

Figure 1-1 Typical Actions for C/SCSC Implementation

the contract. DoD relies on the contractor's systems when they are accepted and does not superimpose duplicative planning and control systems (appendix B).

(3) Contractors having systems previously accepted are encouraged to maintain the essential elements and disciplines of the systems if they intend to remain in the competitive environment for future defense contracts involving large acquisition programs.

c. Typical Actions. This guide contains general procedures which may be adapted to specific situations as they arise. Details concerning each implementation will be developed by the procuring activity responsible for the contracts and be consistent with the guidance contained here and in DoDI 7000.2. A matrix of the overall process is provided in figure 1-1

1-3. Joint Participation:

a. DoD Components. Successful application of the criteria requires the participation and coordinated efforts of various DoD components. Generally, the procuring activity is responsible for ensuring implementation of the criteria with the contractors concerned. It is mutually advantageous, however, for representatives of other interested DoD components to participate in C/SCSC reviews.

b. Liaison. The principal points of contact among DoD components for implementation of the criteria are identified in chapter 4. The primary functions of the representatives participating are also described. These contact points have been established to coordinate functions and monitor the activities responsible for these functions.

1-4. Appeals. Differences in interpretation of criteria application between Government personnel and the contractor which cannot be resolved may be appealed to the focal point (figure 4-1) for resolution. If the difference involves contractor system applications

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concerning more than one DoD component, the appeal may be directed to the Performance Measurement Joint Executive Group (PMJEG) (figure 4-1) for resolution. Either a Government or contractor representative may initiate an appeal. Participants in the appeal have the opportunity to provide appropriate rationale, exhibits, discussion, etc., as required to support the positions. Pending resolution of appeals, the C/SCSC review team should continue to complete assessment of the contractor's compliance with the criteria or the contractor's system description as appropriate.

1-5. Withdrawal of Acceptance. In extreme cases, such as when a contractor has failed to maintain a previously accepted system and will not take actions to restore it to compliance with the criteria, a DoD component may consider withdrawing or suspending acceptance of the contractor's management system. When such a situation occurs, the component will advise the contractor through the cognizant Contract Administration Office that the acceptance is in jeopardy and request the contractor to "show cause" within a reasonable period of time why the acceptance should not be withdrawn, and will advise the other DoD component focal points of its action at the same time. If the contractor disagrees with the component's position and the contractor's systems application concerns more than one DoD component, the contractor may appeal to the PMJEG. However, if the contractor does not respond satisfactorily or appeal to the PMJEG (if appropriate), the component may withdraw or suspend the acceptance after coordination with the other DoD component focal points. When an acceptance has been withdrawn or suspended, the contractor may not claim to have an accepted system until a new letter of acceptance has been issued.

1-6. Revisions and Additions. Persons using this guide are encouraged to submit suggestions for improvements to appropriate focal points identified in figure 4-1. Proposed revisions from outside DoD should be sent to AFSC/ACC, Andrews AFB DC 20334-5000. Proposed revisions from within DoD should be properly coordinated and approved prior to submission. Any conflict between the C/SCSC Joint Implementation and Surveillance Guides should be brought to the attention of the Performance Measurement Joint Executive Group (figure 4-1) for resolution.

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Chapter 2

CRITERIA

2-1. General Information. When required by the contract, the system used by the contractor in planning and controlling the performance of the contract must meet the criteria set forth in paragraph 2-4. The contractor's internal systems need not be changed if they satisfy these criteria. Information required by DoD must be produced from the same system used by the contractor for internal management. DoD reporting requirements are specified separately in DD Form 1423, Contract Data Requirements List, accompanying each solicitation and in the contract (chapter 8).

2-2. Scope:

a. DoD Requirements. Compliance with the criteria as prescribed by DoDI 7000.2 is required by DoD components on significant contracts and subcontracts within major and nonmajor programs, including construction, and highly classified programs; on significant in-house activities, and on contracts executed for specialized organizations and foreign governments.

b. DoD Component Thresholds. Uniform contract values for mandatory application of the C/SCSC will be identified in the policies of the DoD components, as identified in figure 4-1. Application of the C/SCSC to contracts below the mandatory levels established is optional subject to the policies of the cognizant DoD component.

c. Subcontracts. Subcontracts will be selected for application of C/SCSC in accordance with the policies of the cognizant DoD component by mutual agreement between the prime contractor and the procuring authority, according to the criticality of the subcontract to the program (appendix B).

d. Exceptions:

(1) Contracts or subcontracts which are firm-fixed-price or firm-fixed-price-with-economic-price-adjustment normally will not be selected for application of C/SCSC unless fully justified on an individual basis. All other types of contracts, including fixed-price incentive, may have C/SCSC applied.

(2) There are other situations involving major contracts where the application of C/SCSC may not be necessary. In such cases, the procuring activity will forward requests for waivers, prior to releasing the request for proposal (RFP) to the DoD component focal point (figure 4-1) for approval. When waivers are granted, C/SCSC review activities will not be performed. However, contract cost performance reporting will still be required. This reporting will normally be provided via the Cost/Schedule Status Report (C/SSR) or Cost Performance Report (CPR), tailored if necessary. Examples of contractual situations where waivers of C/SCSC requirements will be considered are:

(a) Follow-on contracts within mature production programs which are not experiencing significant cost or schedule problems and where no significant changes to the product are anticipated.

(b) Contracts to acquire items directly from production lines which currently manufacture predominantly commercial products.

(c) Contracts which consist almost entirely of level of effort (as defined in paragraph 2-3.s).

e. Contractor Systems. As a minimum, contractors' management control systems are expected to provide a framework for defining work, assigning work responsibility, establishing budgets, controlling costs, and summarizing, with respect to planned versus actual accomplishments, the detailed cost, schedule, and related technical achievement information for appropriate management levels. Such systems must provide for--

(1) Realistic budgets for work scheduled within responsibility assignments.

(2) Accurate accumulation of costs related to progress of the planned work.

(3) Comparison between the actual resources applied and the estimated resources planned for specific work assignments.

(4) Preparation of reliable estimates of costs to complete remaining work.

(5) Support of an overall capability for managers to analyze available information to identify problem areas in sufficient time to take remedial action.

f. Payments. Nothing in these criteria is intended to affect the basis on which costs are reimbursed and progress payments are made.

2-3. Terms Explained:

a. Actual Cost of Work Performed (ACWP). The costs actually incurred and recorded in accomplishing the work performed within a given time period.

b. Actual Direct Costs. Those costs identified specifically with a contract, based upon the contractor's cost identification and accumulation system as accepted by the cognizant Defense Contract Audit Agency (DCAA) representatives. (See Direct Costs.)

c. Allocated Budget. (See Total Allocated Budget.)

d. Applied Direct Costs. The actual direct costs recognized in the time period associated with the consumption of labor, material, and other direct resources, without regard to the date of commitment or the date of payment. These amounts are to be charged to work-in-process when any of the following takes place:

(1) Labor, material, or other direct resources are actually consumed.

(2) Material resources are withdrawn from inventory for use.

(3) Material resources are received that are uniquely identified to the contract and scheduled for use within 60 days.

(4) Major components or assemblies that are specifically and uniquely identified to a single serially numbered end item are received on a line flow basis.

e. **Apportioned Effort.** Effort that by itself is not readily divisible into short-span work packages but which is related in direct proportion to measured effort.

f. **Authorized Work.** That effort which has been definitized and is on contract plus that effort for which definitized contract costs have not been agreed to but for which written authorization has been received.

g. **Baseline.** (See Performance Measurement Baseline.)

h. **Budgeted Cost for Work Performed (BCWP).** The sum of the budgets for completed work packages and completed portions of open work packages, plus the applicable portion of the budgets for level of effort and apportioned effort.

i. **Budgeted Cost for Work Scheduled (BCWS).** The sum of the budgets for all work packages, planning packages, etc., scheduled to be accomplished (including in-process work packages), plus the amount of level of effort and apportioned effort scheduled to be accomplished within a given time period.

j. **Budgets for Work Packages.** (See Work Package Budgets.)

k. **Contract Budget Base.** The negotiated contract cost plus the estimated cost of authorized unpriced work.

l. **Contractor.** An entity in private industry which enters into contracts with the Government. In this guide, the word also applies to Government-owned, Government-operated activities which perform work on major defense programs.

m. **Cost Account.** A management control point at which actual costs can be accumulated and compared to budgeted cost of work performed. A cost account is a natural control point for cost/schedule planning and control since it represents the work assigned to one responsible organizational element on one contract work breakdown structure (CWBS) element.

n. **Direct Costs.** Any costs which can be identified specifically with a particular final cost objective. This term is explained in FAR 31.202.

o. **Estimate at Completion (EAC).** Actual direct costs, plus indirect costs allocable to the contract, plus the estimate of costs (direct and indirect) for authorized work remaining.

p. **Indirect Costs.** Costs which, because of their incurrence for common or joint objectives, are not readily subject to treatment as direct costs. This term is further defined in FAR 31.203.

q. **Initial Budget.** (See Original Budget.)

r. **Internal Replanning.** Replanning actions performed by the contractor for remaining effort within the recognized total allocated budget.

s. **Level of Effort (LOE).** Effort of a general or supportive nature which does not produce definite end products.

t. **Management Reserve.** (Synonymous with Management Reserve Budget.) An amount of the total allocated budget withheld for management control purposes rather than designated for the accomplishment of a specific task or set of tasks. It is not a part of the Performance Measurement Baseline.

u. **Negotiated Contract Cost.** The estimated cost negotiated in a cost-plus-fixed-fee contract or the negotiated contract target cost in either a fixed-price-incentive contract or a cost-plus-incentive-fee contract.

v. **Original Budget.** The budget established at, or near, the time the contract was signed, based on the negotiated contract cost.

w. **Overhead.** (See Indirect Costs.)

x. **Performance Measurement Baseline (PMB).** The time-phased budget plan against which contract performance is measured. It is formed by the budgets assigned to scheduled cost accounts and the applicable indirect budgets. For future effort, not planned to the cost account level, the performance measurement baseline also includes budgets assigned to higher level CWBS elements, and undistributed budgets. It equals the total allocated budget less management reserve.

y. **Performing Organization.** A defined unit within the contractor's organization structure, which applies the resources to perform the work.

z. **Planning Package.** A logical aggregation of work within a cost account, normally the far-term effort, that can be identified and budgeted in early baseline planning, but is not yet defined into work packages.

aa. **Procuring Activity.** The subordinate command to which the Procuring Contracting Officer (PCO) is assigned. It may include the program office, related functional support offices, and procurement offices. Examples of C/SCSC focal points/procuring activities are AFSC/ESD, AFLC/OC-ALC, AFCC/SSC, AMC/MICOM, and ASN (S&L)/NAVSEASYSCOM.

ab. **Replanning.** (See Internal Replanning.)

ac. **Reprogramming.** Replanning of the effort remaining in the contract, resulting in a new budget allocation which exceeds the contract budget base.

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ad. Responsible Organization. A defined unit within the contractor's organization structure which is assigned responsibility for accomplishing specific tasks.

ae. Significant Variances. Those differences between planned and actual performance which require further review, analysis, or action. Appropriate thresholds should be established as to the magnitude of variances which will require variance analysis.

af. Total Allocated Budget. The sum of all budgets allocated to the contract. Total allocated budget consists of the performance measurement baseline and all management reserve. The total allocated budget will reconcile directly to the contract budget base. Any differences will be documented as to quantity and cause.

ag. Undistributed Budget. Budget applicable to contract effort which has not yet been identified to CWBS elements at or below the lowest level of reporting to the Government.

ah. Variances. (See Significant Variances.)

ai. Work Breakdown Structure (WBS). A product-oriented family tree division of hardware, software, services, and other work tasks which organizes, defines, and graphically displays the product to be produced as well as the work to be accomplished to achieve the specified product.

(1) Project Summary Work Breakdown Structure. A summary work breakdown structure (WBS) tailored to a specific defense material item by selecting applicable elements from one or more summary WBSs or by adding equivalent elements unique to the project in accordance with MIL-STD-881 (latest revision).

(2) Contract Work Breakdown Structure (CWBS). The complete WBS for a contract, developed and used by a contractor within the guidelines of MIL-STD-881 (latest revision) and according to the contract work statement.

aj. Work Package Budgets. Resources which are formally assigned by the contractor to accomplish a work package, expressed in dollars, hours, standards or other definitive units.

ak. Work Packages. Detailed short-span jobs, or material items, identified by the contractor for accomplishing work required to complete the contract. A work package has the following characteristics:

(1) It represents units of work at levels where work is performed.

(2) It is clearly distinguished from all other work packages.

(3) It is assignable to a single organizational element.

(4) It has scheduled start and completion dates and, as applicable, interim milestones, all of which are representative of physical accomplishment.

(5) It has a budget or assigned value expressed in terms of dollars, man-hours, or other measurable units.

(6) Its duration is limited to a relatively short span of time or it is subdivided by discrete value milestones to facilitate the objective measurement of work performed.

(7) It is integrated with detailed engineering, manufacturing, or other schedules.

2-4. Criteria.

The contractor's management control systems will include policies, procedures, and methods designed to ensure that they will accomplish the following:

a. Organization:

(1) Define all authorized work and related resources to meet the requirements of the contract, using the framework of the CWBS.

(2) Identify the internal organizational elements and the major subcontractors responsible for accomplishing the authorized work.

(3) Provide for the integration of the contractor's planning, scheduling, budgeting, work authorization and cost accumulation systems with each other, the CWBS, and the organizational structure.

(4) Identify the managerial positions responsible for controlling overhead (indirect costs).

(5) Provide for integration of the CWBS with the contractor's functional organizational structure in a manner that permits cost and schedule performance measurement for CWBS and organizational elements.

b. Planning and Budgeting:

(1) Schedule the authorized work in a manner which describes the sequence of work and identifies the significant task interdependencies required to meet the development, production, and delivery requirements of the contract.

(2) Identify physical products, milestones, technical performance goals, or other indicators that will be used to measure output.

(3) Establish and maintain a time-phased budget baseline at the cost account level against which contract performance can be measured. Initial budgets established for this purpose will be based on the negotiated target cost. Any other amount used for performance measurement purposes must be formally recognized by both the contractor and the Government.

(4) Establish budgets for all authorized work with separate identification of cost elements (labor, material, etc.).

(5) To the extent the authorized work can be identified in discrete, short-span work packages, establish budgets for this work in terms of dollars, hours, or other measurable units. Where the entire cost account cannot be subdivided into detailed work packages, identify the far-term effort in larger planning packages for budget and scheduling purposes.

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(6) Provide that the sum of all work package budgets plus planning packages within a cost account equals the cost account budget.

(7) Identify relationships of budgets or standards in underlying work authorization systems to budgets for work packages.

(8) Identify and control level of effort activity by time-phased budgets established for this purpose. Only that effort which cannot be identified as discrete or as apportioned effort will be classed as level of effort.

(9) Establish overhead budgets for the total costs of each significant organizational component whose expenses will become indirect costs. Reflect in the contract budgets, at the appropriate level, the amounts in overhead pools that will be allocated to the contract as indirect costs.

(10) Identify management reserves and undistributed budget.

(11) Provide that the contract target cost plus the estimated cost of authorized but unpriced work is reconciled with the sum of all internal contract budgets and management reserves.

c. **Accounting:**

(1) Record direct costs on an applied or other acceptable basis in a formal system that is controlled by the general books of account.

(2) Summarize direct costs from cost accounts into the WBS without allocation of a single cost account to two or more WBS elements.

(3) Summarize direct costs from the cost accounts into the contractor's functional organizational elements without allocation of a single cost account to two or more organizational elements.

(4) Record all indirect costs which will be allocated to the contract.

(5) Identify the basis for allocating the cost of apportioned effort.

(6) Identify unit costs, equivalent unit costs, or lot costs, as applicable.

(7) The contractor's material accounting system will provide for--

(a) Accurate cost accumulation and assignment of costs to cost accounts in a manner consistent with the budgets using recognized, acceptable costing techniques.

(b) Determination of price variances by comparing planned versus actual commitments.

(c) Cost performance measurement at the point in time most suitable for the category of material involved, but no earlier than the time of actual receipt of material.

(d) Determination of cost variances attributable to the excess usage of material.

(e) Determination of unit or lot costs when applicable.

(f) Full accountability for all material purchased for the contract, including the residual inventory.

d. **Analysis:**

(1) Identify at the cost account level on a monthly basis using data from, or reconcilable with, the accounting system:

(a) Budgeted cost of work scheduled and budgeted cost of work performed.

(b) Budgeted cost of work performed and applied (actual where appropriate) direct costs for the same work.

(c) Variances resulting from the above comparisons classified in terms of labor, material, or other appropriate elements together with the reasons for significant variances.

(2) Identify on a monthly basis, in detail needed by management for effective control, budgeted indirect costs, actual indirect costs, and variances along with the reasons.

(3) Summarize the data elements and associated variances listed in (1) and (2) above, through the contractor organization and WBS to the reporting level specified in the contract.

(4) Identify significant differences on a monthly basis between planned and actual schedule accomplishment and the reasons.

(5) Identify managerial actions taken as a result of criteria items (1) through (4) above.

(6) Based on performance to date, on commitment values for material, and on estimates of future conditions, develop revised estimates of cost at completion for WBS elements identified in the contract and compare these with the contract budget base and the latest statement of funds requirements reported to the Government.

e. **Revisions and Access to Data:**

(1) Incorporate contractual changes in a timely manner, recording the effects of such changes in budgets and schedules. In the directed effort before negotiation of a change, base such revisions on the amount estimated and budgeted to the functional organization.

(2) Reconcile original budgets for those elements of the WBS identified as priced line items in the contract, and for those elements at the lowest level of the DoD program WBS, with current performance measurement budgets in terms of (a) changes to the authorized work and (b) internal replanning in the detail needed by management for effective control.

(3) Prohibit retroactive changes to records pertaining to work performed that will change previously reported amounts for direct costs, indirect costs, or budgets, except for correction of errors and routine accounting adjustments.

(4) Prevent revisions to the contract budget base (paragraph 2-3k) except for Government-directed changes to contractual effort.

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(5) Document internally, changes to the performance measurement baseline (paragraph 2-3x) and notify the procuring activity expeditiously through prescribed procedures.

(6) Provide the contracting officer and the contracting officer's authorized representatives with access to the information and supporting documents necessary to demonstrate compliance with the C/SCSC.

NOTE: Paragraphs 2-2a, 2-3, and 2-4 are to be revised to achieve consistency with any revision to DoD Instruction 7000.2.

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Chapter 3

CRITERIA DISCUSSION

3-1. General Information. This chapter is devoted to a discussion of C/SCSC. The explanations and interpretations in this guide are intended to ensure a uniform and consistent implementation of performance measurement requirements. This chapter is intended to clarify DoD requirements and objectives for defense and contractor organizations which must operate cost/schedule control systems which satisfy the criteria. The terminology used in this guide is based on DoDI 7000.2 and is intended to be consistent with it. Contractor cost/schedule control systems may use differing terminology, but such terminology must be directly translatable with relative ease to the terminology of this guide in connection with Government reviews to determine C/SCSC compliance.

3-2. Organization. The organization section of the C/SCSC is concerned principally with definition of work required to be performed by the contractor and the assignment of tasks to organizations responsible for performing the work. It requires that all authorized work be defined within the framework of a CWBS. MIL-STD-881 (latest revision), Work Breakdown Structures for Defense Materiel Items, establishes guidelines governing the preparation and employment of the WBS.

a. Contract Work Breakdown Structure (CWBS). The contractor's extension of the WBS should reflect what contract work is to be done and the way it is to be managed and performed. It must include the levels at which required reports are to be submitted to the Government, contract line items (if in consonance with MIL-STD-881 (latest revision)), major subcontractors, intermediate levels, and cost accounts. Lower level elements should be meaningful products of task-oriented subdivisions of a higher level element.

(1) Objective. A WBS serves many purposes and facilitates planning by providing a formal structure for identifying the work. It simplifies the problems of summarizing contract or project-oriented data, and it establishes the reporting structure for Government-required management information. CWBS planning should take into consideration C/SCSC data elements, summation characteristics, scheduling systems, technical performance parameters, configuration items, and actual cost history. Below the levels contained in MIL-STD-881 (latest revision), the CBWS should recognize and accommodate the differences in the way work is organized and performed in the development and production phases.

(2) Flexibility. The contractor must be provided flexibility and must not be driven to subdividing work down to very low levels. Contractors may recommend, propose, and negotiate alteration of the preliminary contract WBS, particularly below the levels contained in MIL-STD-881 (latest revision). The contractor has complete flexibility in extending the negotiated CWBS to reflect the approach to be used in the work. It is not necessary to extend all elements of the CWBS to the same levels. A basic objective is to subdivide the total contractual effort into manageable units of work. Large or complex tasks may require numerous subdivisions. Other tasks of lesser complexity or size may require substantially fewer levels. There is no need to use "dummy" levels to force all segments of the CWBS to a common level. However, if this enables the contractor to use a particular data accumulation coding system more effectively, dummy levels are acceptable.

(3) Effect of Phase. In the establishment of the lower levels of a CWBS, it is essential to recognize and accommodate the differences between the organization, performance, and management control of work in the development and production phases. System design and development normally are organized and performed along the lines of the major subsystems of the overall system. The design normally is developed in progressively greater detail until it is established at the component level. In the production or manufacturing phase, components first are fabricated or purchased and then joined together in progressively larger subassemblies and assemblies until a complete system is produced. In addition, the production sequence normally follows a physical parts breakdown rather than the subsystem breakdown characteristic of design. It may be impractical therefore to use the same lower levels of the CWBS in the production phase as were used during the development phase. Extension of production WBS requirements below those contained in MIL-STD-881 (latest revision) should be reviewed with the contractor to verify compatibility with the hardware manufacturing breakdown and should be limited to those levels absolutely essential to satisfying DoD management needs.

(4) Subcontract. The level of detail in a subcontract CWBS is independent of the level of detail of the prime contract CWBS and is also independent of the level of the prime contract CWBS element into which the subcontract feeds. This means that if subcontracted work is large enough or complex enough to warrant C/SCSC flow down, then these subcontract work tasks should be broken down to the same extent as if the tasks were a prime contract. Care should be taken by the prime contractor to assure that

the subcontractor has an appropriate WBS in the subcontract.

b. Interrelation of WBS and Organization. The CWBS defines and organizes the work to be performed. The contractor's organizational structure reflects the way the contractor has organized the people who will accomplish the work. To assign work responsibility to appropriate organization elements, the CWBS and organizational structure must be interrelated with each other; that is, functional resporsibility must be established for identified units of work. This interrelationship may occur at any level, but the criteria require that the integration exists at least at the level where performance of work is managed. Other natural points of integration may occur as a result of the manner in which the contractor's work authorization, budgeting, and scheduling functions interface with each other and the CWBS.

(1) CWBS hardware "legs" (e.g., breakdowns of prime mission equipment, support equipment, spare and repair parts, etc.) should not contain functional organization subdivisions at any level between the cost account level and the total contract level. This product-oriented breakdown must allow summarization and analysis by end products regardless of functional organizations working on the end products. However, as long as the contractor's WBS meets these requirements for summarization and analysis, the contractor may include intermediate summarizations (e.g., by function, by geographical area, or for some other purpose) as long as the contractor can and does summarize and analyze data by WBS hardware element.

(2) If there are hardware "leg" functional organization breakdowns within the way the contractor is summarizing or managing, they should be completely explainable and capable of being shown as in compliance with the criteria.

c. Establishment of Cost Accounts. The assignment of lower level CWBS elements to responsible lower level functional managers provides a key point for management control purposes and cost collection. The lowest level at which functional responsibility for individual CWBS elements exists, actual costs are accumulated, and performance measurement occurs is referred to as the cost account level.

(1) **Cost Account Level.** The cost account levels should be primarily determined by the scope of the management tasks. The proper levels should not be an arbitrary predetermination or the result of one "across-the-board" level. As an aid in determining a proper level, the size (dollar value, length, etc.) of the resulting cost accounts should be used to help indicate proper subdivision of work. While cost accounts are usually located immediately above the work package level, they may be located at higher levels when in consonance with the contractor's method of management. In addition to its function as a focal point for collecting costs, the cost account in a performance measurement system is also the lowest level in the structure at which comparisons of actual direct costs to budgeted costs are required. This should not be construed to imply that actual costs cannot be collected at a level below the cost account. Some contractors collect costs and make comparisons at a level below the cost account. The cost collection point must be at a level which will identify the cost elements and factors contributing to cost variances. Data elements BCWS, BCWP, ACWP, and variances determined at the cost account level or below should be summarized through both the WBS and the organizational structure for reporting to higher levels of contractor management and to the Government.

(2) **Basis.** The cost account is the main action point for planning and control of contractual effort, since virtually all aspects of the system come together at this point including budgets, schedules, work assignments, cost collection, progress assessment, problem identification, and corrective actions. In addition, most management actions taken at higher levels occur on an exception basis as a result of significant problems identified at the cost account level. For these reasons the levels selected for establishment of cost accounts should be carefully considered at the outset of a new contract to ensure that the work will be properly defined into manageable units and that functional responsibilities are clearly and reasonably established. The quality and amount of visibility available during the performance of the contract will largely depend upon the level and makeup of the cost accounts.

(3) **Responsibility.** Cost accounts are normally assigned to managers with direct line authority to the performing organizations. However, a cost account may be assigned to a manager even without direct line authority to the performing organization. In this case, the responsible manager must have clearly defined authority and direct managerial responsibility.

(4) **Responsibility Assignment.** Integration of the CWBS and organizational structure at the cost account level may be visualized as a matrix with the functional organizations listed on one axis and the applicable CWBS elements listed on the other axis (figure 3-1). Each organization may then be clearly identified with the work for which it is responsible. Further subdivision of the effort into work packages may be accomplished by the appropriate organization managers by assigning work to operating units. Critical subcontractors (as determined by the prime contractor and DoD program manager) must also be separately measured and integrated into the CWBS. Figure 3-1

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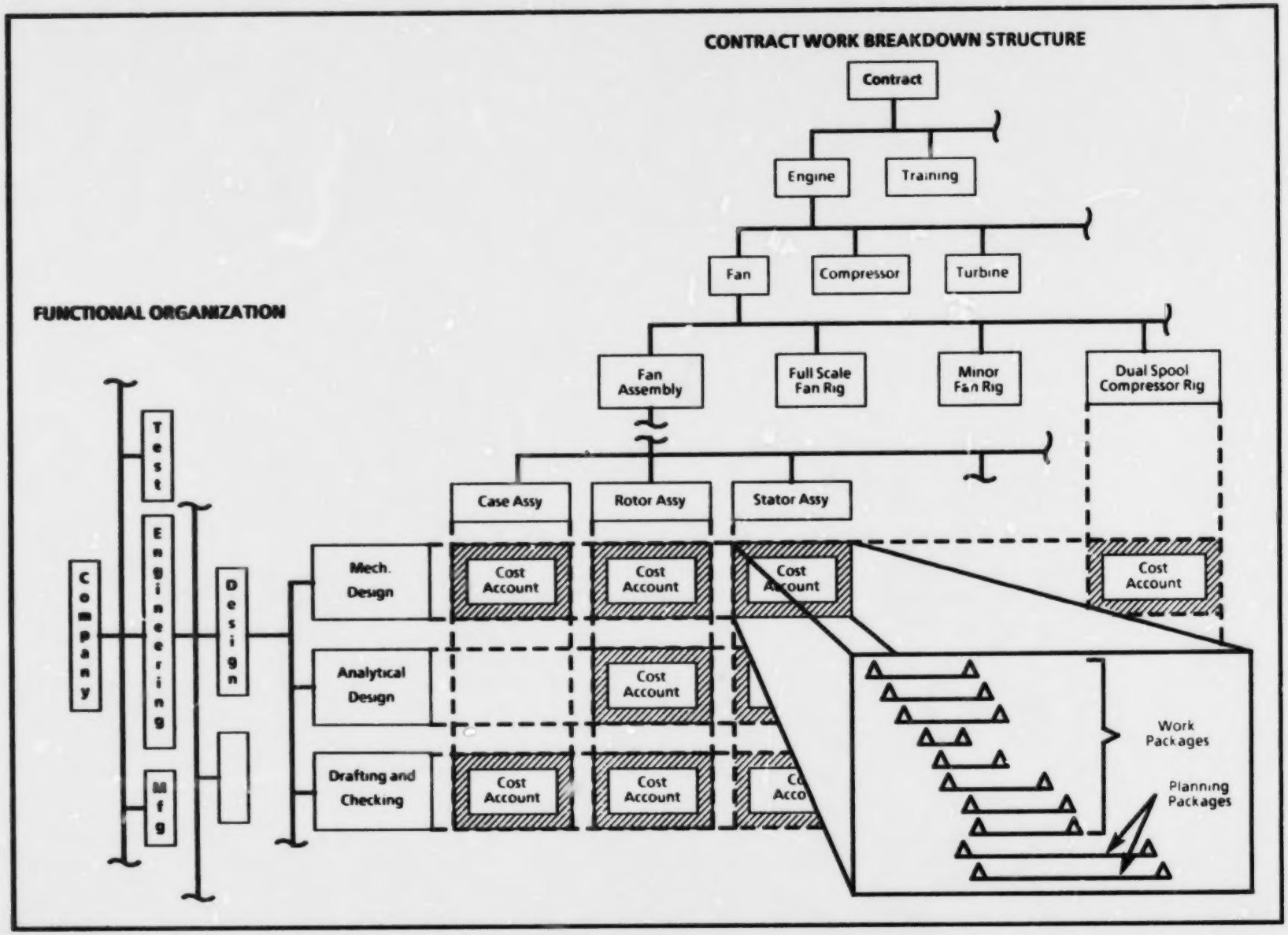

Figure 3-1. Integration of CWBS and Organizational Structure

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illustrates integration of the CWBS and organizational structure for a development contract.

(5) Number, Size, and Length. No generalization should be made relative to the number of cost accounts versus contract size. Company size, company organization, and contract statement of work are but a few of the factors which must be considered. Attempts to standardize the number, value, or length of cost accounts from contract to contract or contractor to contractor are not appropriate. It is not appropriate to insist on cost accounts which are unnecessarily small in dollar value. Some situations with unreasonably small cost accounts may be alleviated by allowing cost accounts which cross functional lines, by allowing LOE and discrete effort to be intermingled, or by raising the level of the WBS or organizational element on which the cost account is based. The length of a cost account should be considered in determining if a cost account is "small." The contractor should be permitted to group work into cost accounts in a manner which reduces the paperwork for cost/schedule control provided there is no substantial distortion in performance measurement or reduction in cost/schedule visibility.

(6) Crossing Functional Lines. Potential problems may occur when an organization is assigned a cost account budget that includes tasks to be performed with nonorganizational resources. A cost account for which an organization is responsible may contain nonorganization work, if nonorganization work is minor, and segregated, and if there are procedures which provide for the responsible organization to monitor, assess, and report performance measurement (including ACWP) on nonorganizational effort.

(7) Cost Accounts for Manufacturing. As indicated in paragraph 3-2a(3), care should be taken to allow the contractor the flexibility to structure a production CWBS which is compatible with the manufacturing breakdown of the production hardware and accommodates any differences in the management required for the development phase and the management required for the production phase. This same need for compatibility with the manufacturing process and recognition of differences in the management of development and production, applies to the point of interface between the CWBS and the organization levels of the contractor which are selected to be the cost account and performance measurement baseline levels for production work.

(a) In general, it is more economical and effective to establish cost accounts for production at higher levels of both the CWBS and the organization structure than would be the case for comparable development effort. During the production phase, it is important for the Government to allow the contractor flexibility in the points of interface between the CWBS and the manufacturing organization levels. Cost accounts should not be established at such a low level of the CWBS that repetitive reporting of detailed performance data would be of questionable utility.

(b) The lowest echelons of production management are primarily concerned with sustaining the required manufacturing throughput as defined by work orders and schedules issued to them. Cost and schedule management by contract or product is normally the responsibility of higher echelons of management within the contractor's production organizations. Management is typically supported by one or more production planning and control organizations which develop integrated schedules for the performance of all production work and prepare appropriate work orders. The planning and control of production typically is in terms of the major functional organizations responsible for material procurement and handling, component fabrications, and product assembly. Tooling, production engineering, quality, inspection, and testing are assigned appropriate supporting roles. Within the major functional organizations, work orders usually cover a manufacturing lot of like items and are likely to cross the boundaries of lower level organizations as the manufacturing lot is moved through the various manufacturing processes.

(c) The management of cost account work in an R&D or low rate production environment should be assigned to a single responsible organizational element. Because of the characteristics of the manufacturing process, the management planning and control of cost account work in a continuing manufacturing environment may not always be performed by a single individual. However, the cost account management function must always be fulfilled within the responsible manufacturing organization, and a single responsible individual must always be assigned from that organization to coordinate the management for each cost account. The procedures used for assigning responsibility and for the performance of the planning and control of cost account work must be documented.

(d) The selection of a low organizational level for the production cost account is likely to result in the assignment of cost and schedule management and analysis responsibilities at a level which is inappropriate for two reasons. First, it will be below the level at which cost and management capability and responsibility actually exist in the organization. Second, it is likely to result in the generation of a substantial number of additional plans, documents, and performance reports without significantly improving management control. A similar condition can arise if cost accounts are established at very low levels of the CWBS. If the two are combined (cost accounts located

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at low levels of both CWBS and organization), the result may be increased costs for control system operation without additional benefits. Tracing of cost and schedule data to very low levels of detail (that is, part number and performing organization) is normally not a problem in production. A satisfactory production planning and control system should have this capability, but cost accounts need not be established at that level. The establishment of cost accounts at the level of major functional departments (or comparable organizations) within the overall manufacturing organization usually results in the proper level of management.

(e) The levels of the work breakdown structure which define appropriate production cost accounts in conjunction with the organization breakdown level are related to the hardware involved. The level of CWBS appropriate for cost accounts in an electronics production contract is likely to be unsuited to an aircraft production contrart. The contractor typically will have a breakdown of the hardware by assembly, subassembly, component, and part number. This breakdown normally will be aligned with the sequence of manufacturing operations followed in building the hardware. It can be of considerable use in determining the appropriate level for establishing cost accounts for production contracts. However, the lowest level of a hardware manufacturing breakdown, the individual part, is almost never the appropriate level for the cost account. Typically, the hardware subsystem, sub-subsystem, or major assembly may be suitable levels for the cost accounts, depending on the product being produced.

(8) Indirect Cost Control. While all direct costs are accumulated in cost accounts, the criteria do not require the recording of indirect costs (overhead) at this level. Contractors must, however, be able to identify the organizational managers responsible for controlling the indirect costs that are allocated to Government contracts. Indirect budgets should be established and assigned to the organization managers responsible for controlling such costs. Further, overhead pools and corresponding budgets must be designated and the methods used for budgeting, control, and allocation clearly defined and documented.

(9) Classification of Effort. At the lower levels, all work should be categorized into one of three different types of effort: (a) discrete tasks which have a specific end product or end result; (b) work which does not result in a final product (e.g., sustaining engineering, liaison, coordination, followup, or other support type activities); and (c) factored effort which can be directly related to other identified discrete tasks (e.g., portions of quality control or inspection). In the C/SCSC, discrete tasks are referred to as "work packages," support type effort as "level-of-effort (LOE)," and factored effort as "apportioned effort." All work under the contract must eventually be planned as and placed in one of these categories during the performance of the contract.

d. Work Packages.

(1) General. Work packages are natural subdivisions of cost accounts and constitute the basic building blocks used by the contractor in planning, controlling, and measuring contract performance. A work package is simply a low level task or job assignment. It describes the work to be accomplished by a specific performing organization and serves as a vehicle for monitoring and reporting progress of work. Documents which authorize and assign work to a performing organization are designated by various names throughout industry. "Work package" is the generic term used in the criteria to identify discrete tasks which have definable end results. Consequently, there may be no need for a contractor to establish a new procedure or introduce new documentation to meet the work package requirement.

(2) Work Package Documents. It is not necessary that work package documentation contain complete, stand-alone descriptions. Supplemental documentation (such as the CWBS Dictionary, specifications, test plans, etc.) may augment the work package descriptions. However, the work package descriptions must permit cost account managers and work package supervisors to understand and clearly distinguish one work package effort from another. In the review of work package documentation, it may be necessary to obtain explanations from personnel routinely involved in the work, rather than requiring the work package descriptions to be completely self-explanatory. To be effective for planning and controlling work, work packages should have the characteristics defined in paragraph 2-3ak.

(3) Work Package Duration. A key feature from the standpoint of evaluating accomplishment is the desirability of having short-term work packages. This requirement is not intended to force contractors to make arbitrary cutoff points simply to have short-term work packages. Work packages should be natural subdivisions of effort planned according to the way the work will be done. However, when work packages are relatively short, little or no assessment of work-in-process is required and the evaluation of contract status is possible mainly on the basis of work package completions. The longer the work packages, the more difficult and subjective the work-in-process assessment becomes unless they are subdivided by objective indicators such as discrete milestones with preassigned budget values or completion percentages.

(a) It is recognized that work packages will

vary significantly between functions. For example, manufacturing work packages tend to be quite short and discrete as natural products of the fabrication and assembly operations. Engineering work package planning may be somewhat more difficult since the work is more dynamic in nature throughout the development phase,making it more difficult to define in discrete terms. For these reasons, the criteria do not attempt to impose specific limitations on work package duration. It should be recognized, however, that reports of contract status, such as the Cost Performance Report, are normally provided to the Government on a monthly basis.

(b) Although reporting normally is done only for summary level items, accomplishment should be based on completed work packages plus a determination of the amount of work completed in open work packages. Work packages which extend over several reporting periods may require special evaluations to determine the amount and value of in-process work completed as of the reporting cutoff date, and an undesirable amount of subjective judgment may be used in making the determination. On the other hand, work packages which start during one reporting period and end during that period or the next, provide a more objective basis for determining status of contract work.

(c) This does not mean that the criteria require work packages to be limited to two months duration, but it does mean that objective devices for evaluating completed work-in-process should exist for longer work packages. The use of objective indicators or milestones within such work packages is a desirable technique which should reduce the subjectivity of the work-in-process evaluation.

(4) Composition of Manufacturing Work Packages. A manufacturing work package is derived from the relationship between the work breakdown structure and the manufacturing organizational structure and represents a logical subdivision of this relationship. A manufacturing work package may be: a combination of several part numbers; a single part number; a combination of several shop traveler packets; a group of sequences on a shop traveler packet; a single purchase order; a purchase order item number; a subdivision of purchase order elements; or other logical product structure/manufacturing subdivisions.

(a) A combination of part numbers may be grouped in one work package (that is, all parts going into one assembly may be a logical grouping for a work package of this type).

(b) A part number may be a work package consisting of one or more shop releases. Each shop release or sequence or combination thereof may be considered as a work package milestone.

(c) A shop release may be a work package. Each sequence or combination of sequences may be considered work package milestones.

(d) Individual sequences may be work packages.

(e) Predetermined combinations of sequences may be work packages.

(f) A combination of purchase orders may be grouped into one work package (that is, several related purchase orders going to one vendor may be a logical grouping for a work package of this type). Each purchase order, purchase order item number, part number, or delivery date, or combination thereof may be considered work package milestones.

(g) A purchase order consisting of one or more part numbers may be a work package. Each purchase order item number, part number, or delivery date, or combination thereof may be considered work package milestones.

(h) A purchase order item number may be a work package. Each part number, or delivery date, or combination thereof may be considered work package milestones.

(i) A part number (purchased) may be a work package. Delivery dates may be considered work package milestones.

(j) A subdivision or grouping of purchase order elements such as "purchase order-part number-delivery date" may be a work package.

(5) Considerations Concerning Manufacturing Work Packages. In the definition and establishment of manufacturing work packages, proper recognition should be given to the characteristics of the production process as opposed to those of design and development. The most significant of these is the relative ease of measurement of most manufacturing work. Manufacturing typically produces a finite output in accordance with a detailed schedule. There are many reasonably accurate and objective techniques for measuring manufacturing performance. The normal production planning and control system usually includes several subdivisions of the manufacturing work which provide a basis for acceptable performance measurement. The objective is to select as the "work package" the work subdivision which best satisfies the requirement for performance measurement.

(a) Since accurate measurement of in-process manufacturing is not usually a problem, the most compelling reason for the selection of the smallest (shortest duration, least value) work subdivision as the production work packages is to minimize the need to make changes to the schedules or budgets of open (in-process) work packages or packages scheduled to be started in the current accounting

period, both of which are restricted by the C/SCSC in the interests of preserving a stable near-term planning and measurement baseline. However, the smallest formally-defined subdivisions of manufacturing work are, in many production control systems, scheduled with definitive dates only a short time before their start, which creates problems in satisfying the normal C/SCSC requirement for advance work package planning.

(b) In many production control systems, longer term planning of the lowest work levels is done only in terms of "schedule windows"; that is, time periods of a month or more in which the actual work performance of the "package" will consume only a fraction of the total time, or of "complete by" dates. In some control systems, the formal scheduling of the lowest level of work subdivision may not exceed this degree of precision at any point. Where systems do provide for the establishment of start and completion dates for smaller subdivisions of manufacturing work, these dates are frequently subject to in-process revision to achieve efficient day-to-day workloading of the performing organizations, and to reflect current schedule priorities.

(c) The use of large work subdivisions to satisfy the C/SCSC work package requirement does not avoid this problem, since the type of schedule changes described are still internal changes to the package when it is in process. Further, the cancellation (closing) and reissue of a new work package for each change generally does not constitute a practical or economical approach in manufacturing, particularly for contractors who have automated their production scheduling and manpower planning (and in some cases also work order preparation and issue).

(d) Under these conditions, a certain amount of rescheduling of open manufacturing work packages is appropriate and acceptable providing procedures are in existence which prevent the inadvertent invalidation of baseline schedules and budgets through these detail-level changes. The substance of such procedures should be to limit the range of rescheduling so as to maintain consistency with key production schedule dates. Key production schedule dates define the required completion dates for key elements of the manufacturing plan, are normally found on internal production schedules, and normally should not be more than three months apart. This flexibility for rescheduling applies only to manufacturing work packages. No changes may be made to BCWS in open, nonmanufacturing work packages.

(e) It is emphasized that the term "work packages" is generic and is used to identify discrete work tasks. In some production control systems involving repetitive manufacturing operations, objective indicators reflecting groups of tasks may be used and viewed as work packages. For example, when objective indicators are used, values should be established each month based on the tasks in the group. The monthly value established for the group of tasks becomes BCWS for the month.

(f) A contractor must utilize anticipated learning when developing time-phased BCWS. Any method used to apply learning is acceptable as long as the BCWS is established to represent as closely as possible the expected ACWP that will be charged to the cost account/work package.

(g) It must be stressed that the measurement of performance of manufacturing work through the use of objective indicators does not eliminate the requirement for detailed planning and control of manufacturing work. The breakdown of manufacturing work into work/shop orders which specify the processes or assembly steps, materials, and organizations necessary to fabricate or assemble a manufacturing lot, and which have assigned schedules and budgets or values, is an accepted general practice in the management of manufacturing effort. This is essential if schedules and efficient performance are to be maintained.

(h) Examples of the use of objective indicators for measuring accomplishment of repetitive manufacturing operations may include--

1. The use of milestones with assigned or readily determinable budget values.

2. Direct measurement of accomplishment in terms of units of work; that is, some form of an earned or equivalent unit measurement system.

3. An input-output measurement system which compares planned levels and actual performance.

These indicate the principal types of manufacturing measurement systems and reflect the fact that a contractor who already has an effective means of measuring manufacturing performance should be able to satisfy the C/SCSC, providing that this means of measurement is integrated with the contractor's baseline plan for the performance of the manufacturing work.

(i) The contractor must still have a baseline plan for manufacturing work which includes time-phased budgets that are consistent with the schedules for the performance of the work. The performance measurement indicators (milestones, earned units, scheduled output, etc.) must be clearly identified and directly related to cost accounts. They must be scheduled in a sequence which supports the achievement of higher level schedules including those specified for cost accounts. These indicators (milestones, units, etc.) must clearly represent the

accomplishment of an identifiable quantity of work within the cost account and be assigned a value reflecting the planned cost of that work. These values must summarize or reconcile to the total budget for the cost account. The use of a measurement base which is only generally indicative of some progress (for example, equal value milestones not related to specific work) is not acceptable.

(j) The performance measurement indicators (milestones, etc.) must be scheduled with sufficient frequency to provide a basis for accurate performance measurement. This entails provision for measurement which supports monthly reports of cost and schedule performance status at the cost account level. To do this, it is normally necessary to measure performance of tasks below the cost account in a way which accurately indicates the performance in each report period. For example, this can be done by scheduling performance measurement indicators at least bimonthly (every two months) or by providing for a means of accurately assessing "in-process" work when indicators are scheduled at greater than bimonthly intervals.

(k) The restrictions on changes to schedules for manufacturing performance measurement indicators are equivalent to those regarding changes to manufacturing work packages specified in paragraph 3-2d(5)(d). Rescheduling must be constrained so as to maintain consistency with key production schedule dates. Procedures should be established which provide the necessary constraints. There should not be changes to the budgets or values assigned to performance measurement indicators which are scheduled to occur in the current monthly accounting period. This is required in order to maintain baseline stability.

e. Level of Effort (LOE). LOE activity is treated differently from work-packaged effort. While work packages are discrete and accomplishment can be measured based on the completed pieces of work, LOE is "measured" through the passage of time. LOE activity must be separately identified from work packaged effort to avoid distorting that which is measurable.

(1) The amount of LOE activity will vary among performing organizations, but within each should be held to the lowest practical minimum. The criteria do not establish guidelines as to how much LOE is acceptable, but require that only work which cannot be work packaged or apportioned be designated LOE.

(2) As a minimum, LOE budgets must be separately substantiated and planned as direct labor, material/subcontract, and other costs. LOE activity should be budgeted on a time-phased basis for control and reporting purposes.

(3) LOE and discrete work are normally segregated by cost account, but in some cases may be intermingled within the same cost account. This intermingling must be minimized to preclude distortion of performance measurement. When LOE and discrete work are mixed within the same cost account, it is preferable that ACWP be collected separately for the LOE and discrete portions and the separate ACWP be used for performance analysis. When ACWP is available only at the cost account level (and not separately available within the cost account for LOE and discrete work), then the amount of LOE intermingled with discrete work must be small (strictly controlled). Intermingling of LOE and discrete work within the same cost account is not allowed when the cost account is large and the amount of both LOE and discrete work is substantial. Judgment must be used when addressing the intermingling of LOE and discrete work within small cost accounts. The splitting of a small cost account into two very small cost accounts should not be required solely to create a total segregation of discrete effort from LOE.

f. Apportioned Effort. Apportioned effort is dependent on or related in direct proportion to the performance of other effort. For example, quality assurance and other inspection functions are frequently treated as apportioned effort based on the amount of manufacturing effort. Apportioned effort may be included and budgeted as a part of the work package or cost account to which it relates or may be established as a separate work package with its own budget which is based on a percentage of the related work package or cost account budget. Factors established for the application of apportioned effort must be documented and applied in a formal, consistent manner. Apportioned effort should be limited to that which is genuinely related to discrete effort.

g. Detailed Planning. While all contractual effort eventually is planned and controlled through work packages, LOE, or apportioned effort, it may not be practicable or possible to do such detailed planning for an entire contract at the outset. Work is planned in finite but sizable increments at the outset of a contract. These planning increments (that is, cost accounts) form the basis for work authorization, budgeting, and master scheduling.

(1) As the contract work is defined, a "rolling wave" planning concept may be used. Tasks suitable for job assignment evolve naturally, and at least the near-term work is segregated into work packages, with the remaining work residing in planning packages. Planning packages have characteristics similar to work packages, but combine under one estimated budget and schedule, tasks which will be converted into several work packages with precise budgets and exact schedules when detail planning is possible. Thus, the contractual effort is progressively divided into smaller

segments as work on the contract proceeds and as responsibility is assigned to successively lower levels of management. However, such work package definition must be accomplished in sufficient time for budgets to be developed and detailed plans for work accomplishment to be completed.

(2) Detailed planning approximately six months in the future should provide for adequate planning and control. The use of "six months" is intended as a guide, and not as a rule. Each management system and contract application should be considered on its own merit. The extent of the detailed planning is determined by the nature of the work, and should be planned as far in the future as practical. Production effort is normally planned considerably longer than six months in the future. However some development projects are less readily defined and consequently detailed planning may be less than six months in advance. Once work packages have been defined and budgeted, controls should be established to minimize further changes to budgets, schedule, or scope of work, particularly in the near term (approximately 30 days).

3-3. Planning and Budgeting. The organization criteria establish the basic framework for defining and organizing the work to be performed. This section of the criteria deals with the requirements for program scheduling and budgeting. Generally, it requires that all authorized work be scheduled and that budgets be assigned to identified manageable units of effort.

a. Planning. The assignment of budgets to scheduled segments of work produces a time-phased plan against which actual performance can be compared. The establishment, maintenance, and use of this plan are extremely important aspects of performance measurement. Good planning demands thoroughness and discipline at the outset with continuing discipline required in the maintenance and operation of the plan. This does not mean that the system must be totally inflexible but that changes to the time-phased budget plan must be rigorously controlled and documented.

(1) While planning is required at all levels of management, it becomes progressively more detailed and finite at lower levels of the organizational structure and the CWBS.

(2) Usually, all of the work for a given contract cannot be planned in detail at the outset, but it can and should be initially divided into larger segments so that the entire contract requirement may be viewed as a sum of identified parts.

(3) When it is clearly impractical to plan authorized work in cost accounts, budget should be identified to effort at higher CWBS levels for further subdivision at the earliest opportunity. The budget for this effort must be identified specifically to the work for which it is intended, be time-phased, and have controls established to ensure that it is not used in performance of other work. Eventually, all the work to be performed will be planned by specific organizational elements to the appropriate level of detail. The key point pertaining to summary level planning is that it is no substitute for early and definitive planning. Without timely and adequate work definition and budget allocation, the validity of the entire performance measurement baseline is questionable.

(4) For authorized unpriced work (relative to a proposed contract change or letter contract), it is acceptable for the contractor to plan and budget near-term effort in cost accounts, with the remaining effort and budget planned at a higher level or maintained in undistributed budget. After negotiation the remaining effort will be planned and budgeted within cost accounts as soon as practical to ensure disciplined baseline planning.

b. Work Authorization. Before work actually begins, the work authorization system should define and identify the work to be done and the organizational elements responsible. Schedules and budgets should be established for all work at appropriate levels within the framework of the CWBS. Task authorizations, work orders, or other appropriate means may be used for this purpose.

c. Scheduling. The scheduling system should provide for all specified work to the lowest defined element of the CWBS in a way compatible with contract milestones and meaningful in terms of the technical requirements of the contract. It should provide schedules so actual progress can be related. Such schedules should identify key milestones and activities which recognize significant constraints and relationships. Scheduling should interface with other planning and control systems to the extent necessary for measurement and evaluation of contract status. The scheduling system should provide current status and forecasts of completion dates for scheduled work. The contractor's summary and detailed schedules should enable a comparison of planned and actual status of program accomplishment based on milestones or other indicators used by the contractor for control purposes.

(1) The criteria do not require the use of any specific scheduling system or methodology. Various scheduling techniques are available which will satisfy these requirements. These techniques may be employed at the summary and detail level but must remain consistent with and supportive of the master schedule. Clear and adequate relationships between the various techniques employed at various levels must be maintained, including vertical traceability.

(2) Basically, the criteria require the scheduling

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system to be formal, complete, and consistent. The scheduling system should contain a summary or master schedule and related subordinate schedules (intermediate and/or cost account) which provide a logical sequence and show interdependencies from the summary to the detailed work package levels. However, when adequate lower level manufacturing schedules are directly related to a higher level schedule, there might not be a need for a separate "work package schedule." If a manufacturing work package is made up of several tasks (i.e., shop releases, operation sheets, etc.) which have their own schedules that directly relate to a higher level schedule (cost account or intermediate), there is no need for the task schedules to be listed on the work package budget document or to have a document called "work package schedule."

(3) Work package documentation does not have to contain specific calendar dates; it must, however, always contain either the month, week, or day, whichever is appropriate.

d. Budgeting.

(1) The planning and scheduling procedures serve as the basis for developing budgets and work authorizations. As the work is progressively defined in greater detail, budgets for the planned work should be concurrently assigned. When planning packages are established within a cost account, the contractor's system should provide for sufficient control of cost account budgets to avoid a situation at the end of the cost account where there is inadequate budget remaining for the work left to be performed. This means that budgets must be related to and be part of the planning package from which the budget originated.

(2) Budgets may be stated either in dollars, man-hours, or other measurable units, although budgets for cost accounts and higher levels are normally expressed in dollars.

(3) Average (level) labor, overhead, and other rates for the life of the contract or cost account, in excess of one year in length, normally cause too much distortion in cost performance and are not acceptable. Monthly, quarterly, semi-annual, or annual rates are acceptable, and should result in a valid time-phased estimate of cost for the task(s) to be accomplished. It is desirable to use the most recent negotiated forward pricing rates, but when this is not feasible, it is acceptable to use rates that provide a valid estimate of costs for the effort to be accomplished during a particular period. At all times, BCWP must be based on the same rates as used for BCWS. Internal replanning of remaining portions of the performance measurement baseline to account for significant changes in the anticipated labor, overhead, and other rates is desirable, but not mandatory.

(4) In general, the budget systems should provide for the following:

(a) Direct budgets allocated to organizations performing the planned work identified to elements in the CWBS.

(b) Indirect budgets allocated to specific organizations having responsibility for controlling indirect costs.

(c) Identification of any management reserves and undistributed budget.

(d) Normally, the total of direct and indirect budgets, and management reserves equals the negotiated contract cost plus the estimated cost of authorized unpriced work.

(5) Since primary budget assignments may be made to functional organizations rather than to pieces of hardware or tasks, the level at which the organizational and CWBS elements are integrated may be the first point at which budgets are specifically assigned to CWBS elements. This is not always the case. Certain elements of the CWBS may be priced line items with budgets assigned at the summary level, and then subdivided as the work is broken down into manageable units of effort. Regardless of the budgeting technique , all work eventually receives a budget.

e. Management Reserve.

(1) In most major acquisition contracts, particularly in the development phase, there is considerable uncertainty regarding the timing, CWBS elements involved, or magnitude of future difficulties. The C/SCSC permit the use of a management reserve provided that adequate identification and controls are maintained. Management reserve budget and its use must always be accounted for at the total contract level. Normally, it is retained and controlled at this level, although in some cases it might be distributed to and controlled at lower management levels. In any event, management reserve budget is maintained separately from undistributed budget. There is no such thing as "negative management reserve." If the contract is budgeted in excess of contract budget base (the negotiated contract cost plus the estimated cost for authorized unpriced work), the provisions applicable to formal reprogramming should apply.

(2) Management reserve is not a contingency which can be eliminated from contract prices during subsequent negotiations or used to absorb the cost of contract changes. The contractor should not be required to use existing management reserve to provide funds for authorized but undefinitized work or other modifications to authorized contractual efforts. The contractor may, if the documented management system permits, use management reserve to provide temporary budgets for authorized undefinitized effort;

however, it must remain clear to both parties that the management reserve budget was derived from cost previously negotiated for the contractual effort authorized prior to the change in process. Definitization of contract changes may result in establishing a new level of management reserve reflecting the revised effort. This new level may exceed prior reserves.

f. Undistributed Budgets. Budgets applicable to contract effort, which cannot be specifically identified to CWBS elements at or below the level specified for reporting to the Government, are referred to as undistributed budgets.

(1) The establishment of an undistributed budget may be necessary when contract changes are authorized. For example, reporting deadlines may preclude the planning of newly authorized work prior to report preparation. However, since budgets for all authorized contract work must be accounted for, some provision for the budget applicable to contract changes must be made. In such cases, undistributed budgets identified to the specific contract changes may be established. Except as provided in (2) below, the budget should be distributed to appropriate CWBS elements and cost accounts by the end of the next reporting period.

(2) For authorized work which has not been negotiated, the contractor may maintain budgets in an undistributed budget account until negotiations have been concluded, allocating budget only to that work which will start in the interim. After negotiations, the remaining budget should be allocated appropriately. Both before and after negotiations, budgets may be allocated as additions to the scope of existing cost accounts or when appropriate allocated to separate cost accounts.

g. Contract Budget Base. The original budget established for those elements of the CWBS identified as priced line items in the contract should constitute a traceable basis against which contract growth can be measured. The starting point or base on which these original budgets are built is the negotiated contract cost (paragraph 2-3u). For C/SCSC purposes, this is called the contract budget base. The contract budget base increases or decreases only as a result of changes authorized by the contracting officer. For definitized changes, the contract budget base changes by the amount negotiated for those changes. For authorized work which has not been negotiated, the contract budget base changes by the amount of cost estimated by the contractor for that effort. After negotiations, the contract budget base is adjusted to reflect the negotiation results. For a letter contract the contract budget base is initially the contractor's estimated costs for authorized work. The contract budget base, therefore, is a dynamic amount, changing as the authorized work under the contract changes; but it is controlled, as it cannot be changed by the contractor except as a result of contracting officer actions.

h. Economic Price Adjustment (EPA). For those contracts which recognize abnormal escalation by use of price adjustment clauses, the amounts related to these clauses can be treated in essentially the same manner as undefinitized changes.

(1) If it can be foreseen that economic conditions will apparently result in contract cost revision under the economic price adjustment clause, the contractor may estimate the amount of the adjustment anticipated at the end of the specified economic price adjustment period or other period agreed to by the contracting parties and may include that amount in the contract budget base. Distribution of the estimate should be made to management reserve and the performance measurement baseline or both.

(2) As the contract procceds, and amounts applicable to EPA are definitized, the contract budget base is adjusted to reflect these changes and also to reflect the contractor's latest estimated cost adjustment for the next period. At all times, the economic price adjustment estimate should be identified to contract specified periods and reflect actual experience, current trends, and a reevaluation of future conditions. Thus, the performance measurement baseline can reflect the economic price adjustment conditions contained in the contract, and performance can be measured against a more realistic plan.

(3) At the contract level, estimates for economic price adjustment will be identified and reported separately from estimates for unnegotiated changes. No matter what period is chosen for inclusion of the estimate in the contract budget base, the estimated and definitized values should be specifically identified and reported by the time periods specified in the economic price adjustment clause. The purpose is to identify properly what was definitized versus what was estimated. This is necessary for estimate tracking, for tracing adjustments to management reserve, and to the budgets for remaining work.

i. Performance Measurement Baseline. As the contract effort is defined within the CWBS and identified to responsible organizational elements, the basis for budget assignments to identified tasks is provided. Eventually, each work package will have a budget. Since all work packages cannot normally be planned at the beginning of a contract, initial planning may consist of larger segments of work assigned to designated organizational elements. These organizational work assignments frequently serve as cost accounts in addition to their role in the planning function. Budgets assigned to cost accounts are time-phased according to the schedule for performing that

work, thus forming the major portion of the time-phased budget baseline; that is, the performance measurement baseline which is used in the measurement of both task and organizational performance. Further budget assignments to work packages are made as detailed planning proceeds. When all work packages are planned within a cost account, the sum of the assigned budgets plus LOE and apportioned effort should equal the total cost account budget.

(1) Cost Account Budgets. All cost accounts must contain a budget, schedule, and scope of work and should realistically represent the manner in which work is assigned and budgeted to the organizational units. The cost account budget should include all direct costs for the total of work with separate identification of cost elements (labor, material, other direct costs). Establishing and maintaining control at the cost account level permits flexibility in the management of resources at the lower detail levels through work package replanning.

(2) Cost Account Length. Since cost account budgets and schedules also establish the constraints required for baseline control, cost accounts should not be exorbitantly long, or additional controls are needed. When cost accounts average about a year in length replanning within cost accounts can be accommodated without the need for rigid constraints. It is not intended to limit cost accounts to one year in length, but to ensure that budgeting procedures prohibit budget planned for far-term work from being used in the near term. Therefore, cost accounts which exceed a year in length must be disciplined by budget allocation constraints and/or procedures that prohibit the premature use of budget planned and required for far-term effort within these accounts.

(3) Cost Account Replanning. Replanning of work packages within cost accounts is sometimes necessary to compensate for internal conditions which affect the planning and scheduling of remaining work. Such replanning should, however, be accomplished within the constraints of the previously established cost account schedule and budget. When more extensive replanning of future work is necessary and the total cost account budget must be changed, management reserves may be used to increase or decrease the cost account budgets if done in a formal, documented manner.

(a) If replanning requires that work and associated budget be transferred between cost accounts, this transfer must also be documented. Except for correction of errors and accounting adjustments, no retroactive changes will be made to budgets for completed work. Replanning actions designed to reduce costs, improve or reflect improved efficiency of operations, or otherwise enhance the completion of the contract, are encouraged.

(b) Replanning actions which significantly affect the time-phasing of the performance measurement baseline should be clearly auditable by review of contractor records and should be shown in applicable reports to the DoD procuring activity. Maintenance of a performance measurement baseline is required to ensure that deviations from plan are visible and can be examined to determine their causes (paragraph 3-6d). Reschedule of manufacturing work packages is discussed in paragraph 3-2d(5).

(4) Relation to Negotiated Contract Cost. After contract negotiations are completed, the total allocated budget used to report contract performance to the DoD must always represent an amount which is formally recognized by both parties. This is to force recognition of contractual requirements and to preclude undisciplined changes to the performance measurement baseline. The initial establishment of the performance measurement baseline should be tied to the negotiated contract cost (paragraph 3-3g). As new work is authorized on the contract, the negotiated contract cost and the performance measurement baseline are increased accordingly. Normally, the total allocated budget (the performance measurement baseline plus management reserve) should not exceed the negotiated contract cost plus the estimated cost of authorized but unpriced work (the contract budget base).

(5) Internal Operating Budgets. Nothing in the criteria prevents the contractor from establishing an internal operating budget which is less than or more than the total allocated budget. However, there must be controls and procedures to ensure that the performance measurement baseline is not distorted.

(a) Operating budgets are sometimes used to establish internal targets for rework or added in-scope effort which is not significant enough to warrant formal reprogramming. Such budgets do not become a substitute for the cost account budgets in the performance measurement baseline, but should be visible to all levels of management as appropriate. Cost account managers should be able to evaluate performance in terms of both operating budgets and cost account budgets to meet the requirements of internal management and reporting to the Government.

(b) Establishment and use of operating budgets should be done with caution. Working against one plan and reporting progress against another is undesirable and the operating budget should not differ significantly from the cost account budget in the performance measurement baseline. Operating budgets are intended to provide targets for specific

elements of work where otherwise the targets would be unrealistic. They are not intended to serve as a completely separate work measurement plan for the contract as a whole.

(6) Baseline Greater Than Contract Budget Base.

(a) Any increase which results in a total allocated budget in excess of the contract budget base constitutes formal reprogramming and must be formally submitted by the contractor and formally recognized by the procuring activity. This includes documented reconciliation from the old baseline. It should be clearly understood that such changes are not acceptable on a frequent basis, such as quarterly or semi-annually, but may be expected to occur only once or twice during the life of a multiyear contract. One would not expect such an adjustment, for instance, on a contract that covers a single year.

(b) When a contractor formally notifies the procuring agency of a total allocated budget in excess of the contract budget base and the revised plan is accepted for reporting performance to the Government, then it should also be recognized that this condition may be an indicator to the Administrative Contracting Officer (ACO) that progress payments, liquidation rates, or cost reimbursement fee vouchers may require review for appropriate adjustment.

3-4. Accounting. The contractor's accounting system must provide for adequately recording all direct and indirect costs applicable to the contract. Such costs must be directly summarized from the level at which they are applied to the contract through both the WBS and functional organization structures according to procedures acceptable to DCAA.

a. Cost Accounts. Ordinarily, cost accounts are established by the contractor at the lowest level in the CWBS at which actual costs are recorded and compared with budgeted costs. As the natural control point for cost/schedule planning and control, the cost account provides a logical point for cost collection and evaluation (paragraphs 3-2c and 3-3i(1)).

b. Direct Costs. The criteria require the contractor to record direct costs on an applied or other acceptable basis for performance measurement and unit costing purposes. Direct labor costs are normally applied to work-in-process on an as-used (applied) basis. Direct material costs should also be recorded in the same manner; however, there may be cases where it is not logical to make this a uniform requirement. In these cases, if existing contractor systems provide the fundamental elements for cost and schedule performance measurement and for determining unit or lot cost as appropriate, they may be accepted even though they do not record material as a direct cost at the point of usage.

c. Material Accounting System.

(1) To be acceptable, contractor material accounting systems should have the following characteristics:

(a) An accurate cost accumulation system which assigns material cost to appropriate cost accounts in a manner consistent with the budget.

(b) Recognized costing techniques acceptable to DCAA.

(c) Capability to establish material price variances and cost variances attributed to material usage where appropriate.

(2) Little need be said of the first two characteristics since these are the province of the DCAA personnel in their normal activities and they are participants in the review.

(3) With regard to material accounting, the contractor should be able to account for all material subcontracted items and purchased parts which, by their value and significance, warrant such attention. It is not cost effective to require individual identification of such things as small hardware, miscellaneous wiring materials, and other items of a similar nature. Accurate recording of transfers between contracts is required in the material accounting system.

(4) Material price variance is an essential element of material cost control. This can be determined early in the cycle of ordering materials, at which point the price of the materials can be compared with the amount budgeted for that material. Accumulation of these differences represents the total material price variance. Various routines can be used to calculate this variance, but the system should readily provide such data. When it becomes known that material costs will vary from the amounts planned, the contractor should show these differences in the estimates of final costs.

(5) Material usage variance is an important cost factor on repetitive large volume, production-type jobs, but may be of marginal significance on single copy R&D equipment. Final material usage variances are not available until the work is completed. However, acceptable cost accounting techniques for analyzing and determining current and projected usage variances should be expected to provide continuing internal measurement when the value and nature of the material warrant. The criteria contain a requirement that contractors' systems be capable of formally planning and tracking the cost of material usage. For most contractors, purchases of material in excess of bill of material requirements are standard practice for many categories of material. Planning for material usage allowance to cover scrap, test rejections, unanticipated test quantities, and the like, is a practical

necessity and the contractor should have records of such provisions. The more uncertain the expected usage, the more important it is to have a good plan and to keep track of performance against it particularly for contract peculiar materials or materials which require long procurement leadtimes.

(6) There are two preferred methods for budgeting for unanticipated excessive scrap (although other methods may be acceptable):

(a) Management reserve may be used to increase the budget for the replacement lot (or increased subsequent lot size) which was required due to unusually large scrap; or

(b) Negative BCWP can be assigned in the current period to recognize BCWP which had previously been overstated due to significant scrap. (Negative BCWP which appears on the Cost Performance Report should be explained in Format 5 of the CPR).

(7) In those instances where the contractor maintains separate stores inventory areas, actual or applied direct cost of "store" material or components will be removed from the inventory account and charged as actual direct cost on the contract when issued. Normally, all unused material should be returned to stores for disposition. Actual direct material cost includes the materials in the final product, scrap, damaged materials, and so forth, plus any material purchased for the contract but not used, for which an alternate use cannot be found. However, unit cost projections for follow-on procurements would be expected to include material consumed plus material requirements for schedule assurance based on waste and spoilage trends determined from an appropriate phase of the contract performance.

(8) Work progress is determined on the basis of completion of individual segments of work or the attainment of specific milestones. Each such segment of work or milestone is assigned a budget for the resources estimated as necessary to perform that work. Actual resources expended must be recorded on the same basis as resource budgets were assigned if meaningful comparisons are to be made.

(a) The definition of applied direct costs takes into consideration the different types of material involved in a contract. Not all material items are processed through inventory accounts. High-dollar value items such as major components or assemblies are frequently scheduled for delivery in accordance with the assembly line schedule. Items of this type are not usually scrapped if found defective, but are returned to the supplier for rework or repair. Under the applied direct cost approach, the costs of such items may be considered as applied direct material costs at the time they are received provided they are either scheduled for use within 60 days or are specifically identified to a unique, serially-numbered end item.

(b) If a contractor's system is qualified on other than an "applied cost" basis, actual direct costs may be recorded upon receipt of material, or upon payment, as appropriate under the system.

(9) Neither the applied direct cost approach nor any acceptable alternate should be interpreted to relieve the contractor of the need to maintain records of contract commitments for material.

(10) Material BCWS and BCWP are intended to permit measurement of events which reflect progress in contract performance, not for measurement of administrative or financial events (e.g., booking of actual costs or invoice payment). Therefore, BCWS should normally be scheduled in accordance with a contract event and BCWP should be earned when the event occurs.

(a) To avoid distortion, actuals should be recorded when BCWP is earned. In situations where BCWP is earned and the invoice has not been paid, estimated actual cost may be incorporated into ACWP from purchase order information.

(b) Administrative or financial events may be used as indicators for contract events when such indicators occur in the same reporting period as the contract events. However, it is not generally acceptable to use administrative or financial events as indicators when they would depict performance past the actual material use or need dates.

d. Indirect Costs. The contractor should charge indirect costs to appropriate overhead pools by methods acceptable to DCAA.

(1) Controls of indirect costs are required and should include--

(a) Establishment of realistic time-phased budgets or forecasts by organization; for example, department or cost center.

(b) Placement of responsibility for indirect costs in a manner commensurate with a person's authority.

(c) Variance analyses and appropriate action to eliminate or reduce costs where feasible.

(d) Review of budgets at least annually and when major unforeseen variations in workload or other factors affecting indirect costs become known.

(2) After indirect costs are accumulated and allocated to contracts, they are applied at the level selected by the contractor. There is no requirement in the criteria to apply indirect costs at either the work package or the cost account levels, although some contractors may choose to do so. However, it must be possible to summarize indirect costs from the applied level to the contract level without the need for further divisions.

e. Level of Effort. LOE costs are normally

segregated from costs of discrete effort at the cost account level to permit an evaluation of the measurable effort before it is combined with the support effort. This segregation is intended to prevent distortion of measurable activity until at least one comparison of BCWP versus ACWP has been made.

f. **Apportioned Effort.** Cost should be directly related to the discrete work packages or cost accounts to which the cost pertains. Factors and methods used to apply apportioned effort should be formally defined in established procedures with such costs accumulated on the same basis as budgets are allocated.

3-5. Analysis. The C/SCSC do not require the submission of data or reports from the contractor to the Government. The criteria only set forth characteristics which contractors' systems must possess, and specify the type of data which should be derived from the systems. Five basic data elements are identified in the criteria: ACWP, BCWS, BCWP, Budget at Completion (BAC) and Estimate at Completion (EAC). ACWP (direct and indirect) was discussed previously under Accounting (paragraph 3-4). BAC was discussed in paragraph 3-3i. This section discusses BCWS, BCWP, EAC, and analyses of variances resulting from comparisons of these five basic elements.

a. **Budgeted Cost for Work Scheduled.** BCWS represents the time-phased budget plan against which performance is measured. For the total contract, BCWS is normally the negotiated contract cost plus the estimated cost of authorized but unpriced work (less any management reserve). It is time-phased by the assignment of budgets to scheduled increments of work.

(1) For any given time period, BCWS is determined at the cost account level by totaling the budgets for all work packages scheduled to be completed, plus the budget for the portion of in-process work (open work packages) scheduled to be accomplished, plus the budgets for LOE and apportioned effort scheduled to be completed during the period.

(2) A contractor must utilize anticipated learning when developing the time-phased BCWS. Any recognized method used to apply learning is acceptable as long as the BCWS is established to represent as closely as possible the expected ACWP that will be charged to the cost account/work package.

(3) In developing BCWS, consideration should be given to the methods planned for taking credit for BCWP (b below).

b. **Budgeted Cost for Work Performed.** BCWP consists of the budgeted costs for all work actually accomplished during a given time period. At the cost account level, BCWP is determined by totaling the budgets for work packages actually completed, plus the budget applicable to the completed in-process work within open work packages, plus the budgets for LOE and apportioned effort associated with completed work.

(1) The major difficulty encountered in the determination of BCWP is the evaluation of in-process work (work packages which have been started but have not been completed at the time of cutoff for the report). As discussed previously in paragraphs on the organization criteria, the use of short-span work packages or establishment of discrete value milestones within work packages will significantly reduce the work-in-process evaluation problem and procedures used will vary depending on work package length. For example, some contractors prefer to take no BCWP credit for a short-term work package until it is completed, others take credit for 50 percent of the work package budget when it starts and the remaining 50 percent at completion. Some contractors use formulae which approximate the time-phasing of the effort, others use earned standards, while still others prefer to make physical assessments of work completed to determine the applicable budget earned. For longer work packages many contractors use discrete milestones with preestablished budget or progress values to measure work performance.

(2) The criteria do not specify any particular method as the technique used will largely depend on work package content, size, and duration. The use of arbitrary formulae, as described above, should be limited to very short work packages (paragraph 3-2d(3). At all times BCWP must be computed using the same labor, overhead, and other rates as for BCWS.

c. **Data Analyses:**

(1) Comparisons of BCWS with BCWP relate work completed to work scheduled during a given period of time. While this provides a valuable indication of schedule status, in terms of dollars worth of work accomplished, it may not clearly indicate whether or not scheduled milestones are being met since some work may have been performed out of sequence or ahead of schedule. A formal time-phased scheduling system must, therefore, provide the means of determining the status of specific activities and milestones.

(2) Comparisons of BAC with EAC are required internally at the cost account level and provide estimated variances expected at the completion of the contract. Cost account managers need to be constantly alert to circumstances which will cause the estimate at completion and, therefore, the variance at completion, to change. Such changes must be reported monthly (paragraph 3-5g).

(3) Comparisons of BCWP and ACWP will clearly

show whether completed work has cost more or less than was planned for that work. Analysis of these differences should reveal the factors contributing to the variances, such as poor initial estimate for the task, technical difficulties requiring application of additional resources, the cost of labor or materials different than planned, personnel efficiency different than planned, or a combination of these or other reasons.

(4) Comparisons of BCWP with BCWS and with ACWP are required at the cost account level. Cost accounts consist of an aggregation of work packages which are the responsibility of a single organization. Managerial authority and responsibility for corrective action should exist at this point making the cost account a key management control point in the system. It is important that the performance measurement baseline be maintained at this level since comparisons of planned versus actual performance are of little value if the measurement base is subject to uncontrolled fluctuation and change. Since higher level management information consists of direct summaries of the results of such comparisons, there is less need for further calculations at high levels to determine program status.

(5) When a subcontractor is required to comply with the C/SCSC and provide a Cost Performance Report (CPR), subcontractor data will be provided to the prime contractor for performance measurement purposes. If a subcontractor is not required to comply with the criteria, the prime contractor should establish procedures which tie the planned and actual accomplishment of the subcontractor to valid indicators, such as the proposed payment schedule or completion of identified work segments. The Cost/Schedule Status Report (C/SSR) may be used for obtaining the data from a subcontractor when the CPR is not needed.

(a) In all other cases if a subcontract (including firm fixed price) is $1M or more, has at least six months between the beginning of work and the first significant delivery, and is scheduled to receive progress payments, then the prime contractor will normally be expected to measure in-process performance of that subcontractor prior to receipt by the prime of the product(s) being produced by that subcontractor. The prime contractor should establish procedures which tie the planned and actual performance of the subcontractor to valid indicators (such as milestones, completion of identified work segments, or proposed payment schedules where directly related to accomplishment).

(b) While the foregoing approach is preferred, other procedures for determining and reporting subcontract progress may be acceptable (for subcontracts which do not have a CPR or C/SSR requirement) provided that the procedures furnish:

1 Adequate indicators of progress including progress prior to delivery of subcontracted items;

2 Identification, cause, and impact of the subcontract schedule or technical problems;

3 Reporting in CPR Format 5 (Problem Analysis) of the impact of such subcontract problems as are causing (or are expected to cause) impact on the performance of the prime contract;

4 Reporting in CPR Formats 1 and 2, the appropriate increased EACs reflecting these problems;

5 Reporting in CPR Formats 1 and 2, the proper BCWS, BCWP, and ACWP at the appropriate point (between receipt and consumption).

d. Summarization. BCWS, BCWP, ACWP, and associated variances should be summarized directly into both the WBS and organizational structure from the appropriate level (cost account or below) to provide both contract status and organizational performance at all levels of management. Because favorable variances in some areas are offset by unfavorable variances in other areas, higher level managers will normally see only the most significant variances at their own level. However, the accumulation of many small variances which may be adding up to a large overall cost problem not attributable to any single major difficulty will also be evident. The same is true of the information to be reported to the Government.

(1) If required by the contract, the Cost Performance Report provides data to the Government at a summary level, normally the third level of the contract WBS or higher. Functional cost information will be reported at the total contract level for major functional categories which reflect the contractor's organizational structure, such as engineering, manufacturing, tooling, material, subcontract, etc. While only problems having significant cost or schedule impact on the contract will appear on this report due to the wash-out effect of favorable and unfavorable variances, all significant variances should be explained in the problem analysis portion of the report. The reason for reporting only summary level information to the Government is that as long as contract performance is proceeding according to plan, there should be no need to report additional detail. If actual performance begins to deviate from the plan, the contractor's system should provide the capability for tracing the variances to their source to isolate the causes of the deviation.

(2) It should be recognized that this method of performance measurement is only one of the management tools available to contractors and DoD project managers. Many major problems are disclosed through methods other than monthly cost reports. For example, failure to meet closely monitored schedule,

manpower, or technical achievement plans and requirements should promptly alert contractor management that a problem exists. However, the contractor's internal cost performance reports and the Cost Performance Reports to the Government should indicate the overall cost impact of such problems on the contractor.

e. Significant Variances. It is important to establish reasonable variance thresholds that will cause problem analyses and narrative reports to be prepared. Careful selection of these thresholds is necesssary to prevent unnecessary work associated with preparing an excessive number of written analyses. The analysis of every cost and schedule variance is usually unnecessary and unproductive. Therefore the contractor should establish internal cost and schedule variance thresholds and analyze only those variances which are significant; that is, those which exceed the thresholds. These thresholds may vary with respect to the level of the WBS element, the level of the organizational element, the amount of work remaining, etc. It is essential that these internal variance thresholds be so established that all significant variances will be analyzed while at the same time avoiding an excessive number of variance analyses.

(1) Generally, thresholds are established requiring a variance analysis for any cost or schedule variance that exceeds a certain percentage of BCWS or BCWP and/or exceeds an established dollar minimum (for example, ± _____% of cum BCWS, or $_____,whichever is greater). When initially establishing the thresholds, it may be advisable to provide for tightening these thresholds as the contract progresses, in view of the increased cumulative values of BCWS, BCWP, and ACWP.

(2) Another approach is to establish the thresholds as a percentage of the Budget at Completion (BAC) rather than as a percentage of BCWS and BCWP (for example, 100(BCWP-ACWP) ÷ BAC for cost variance threshold; 100(BCWP-BCWS) ÷ BAC for schedule variance threshold). This results in a threshold which becomes a progressively smaller percentage of cumulative BCWS and BCWP as the contract progresses. Since this type of variance threshold may be relatively loose early in the contract, the threshold for early variances may be limited by adding a threshold based on a percentage of cumulative BCWS (for example, ± _____% of BAC, or ± _____% of cumulative BCWS, whichever is less).

(3) Whenever a variance exceeds the prescribed threshold, analysis and explanation are required. Consideration should be given to establishing higher thresholds for underrun or ahead-of-schedule conditions to minimize the generation of analyses and explanations of variances that do not have potential for adverse impact.

(4) The selection of thresholds should avoid the explanation of variances that are unimportant, while not missing variances that are significant. It should be recognized that no particular approach or set of thresholds is "best" for all circumstances. It may be appropriate to use different thresholds for different levels of management, for different organizational elements, and for reporting to the customer. Whenever, during the performance of a contract, it becomes apparent that the thresholds are no longer appropriate, they should be revised. Too few or too many variance analyses in relation to the performance status of the contract may indicate improperly set thresholds which require adjustment.

f. Technical Achievement.

(1) The key to meaningful correlation of technical achievement with cost and schedule control is the proper organization and supervision of effort. If a CWBS matches the specification tree and also reflects the manner in which the contractor actually does the work, the problem of correlation is greatly simplified. In correlating cost, schedule, and technical achievement, it is apparent that unfavorable cost or schedule conditions are usually caused by technical difficulties. Therefore, quantitative information as to technical status is desirable and should be supplemented by narrative reports.

(2) As work on a contract progresses, the contractor determines the adequacy and quality of the work performed by making inspections, tests, or other types of technical measurements. If the results are satisfactory and no corrective action is required, the work is then allowed to proceed further. If, on the other hand, deficiencies are found, the contractor considers various alternatives for corrective action; for example, redesign, scrap and remake, rework, etc. When considering these alternatives, the impact on cost and schedule must be weighed in addition to the technical considerations. After one of the alternatives is selected as the desired course of action to correct the deficiencies, it becomes necessary to plan the additional work in terms of new work packages or additions to existing unopened work packages and to change the schedules affected. In some cases the contractor may choose to provide additional budget to the responsible organization. Thus, there is a close relationship between technical achievement (that is, inspection and test) and its impact on cost and schedule.

g. Estimate at Completion. C/SCSC also require the contractor periodically to develop comprehensive estimates of costs at contract completion. In developing estimate at completion, the contractor should use all available information to arrive at the best possible estimate of costs for all authorized contract effort.

(1) The procedure should be systematically and consistently used from period to period, with adequate consideration given to performance to date. The EAC procedures should provide for the formulation or updating of an estimate of cost to completion, time-phased to the extent necessary to reflect projected rates. This is necessary to ensure that resource requirements are realistic and phased in accordance with projected performance. In addition, the estimate at completion should be examined monthly for accuracy as a routine cost management function and should be updated, as warranted. Such an examination is required to ensure reliable and timely EAC status reporting consistent with contractor reporting requirements.

(2) The EAC process focuses on the cost account manager, but it should also provide for regular input from production control, industrial engineering, material management, finance, and other functions which develop information which may impact cost.

(3) Both the comprehensive EACs and the monthly updates are essential as a basis for management decision making by both the contractor and DoD managers. While no specific time period for developing the comprehensive EAC is established by the criteria, it is expected that a comprehensive estimate will be prepared on an annual basis as a minimum, usually in support of the business plan update, or more frequently when performance indicates that the current estimate is invalid. The estimated cost at completion submitted to the Government on the Cost Performance Report should be reconcilable with internal cost reports and the contractor's latest statement of funds requirements reported on DD Form 1586, Contract Funds Status Report (CFSR) , or its equivalent. EACs should be established without regard for contract ceilings.

3-6. Revisions. The final section of the criteria pertains to revisions to planning which are necessitated either by contractual change or by internal conditions which require replanning within the scope of the contract. It also deals with maintaining the validity of the performance measurement baseline.

a. Contract Changes. Government-directed changes to the contract can impact virtually all aspects of the contractor's internal planning and control system, such as work authorizations, budgets, schedules, and estimated final costs. Revisions required to incorporate authorized changes to contractual effort should be made in a timely manner.

(1) Where the change has been negotiated, budget revisions are based on the negotiated cost of the change. Where work is authorized before negotiations, appropriate change order planning will be accomplished and budgets will be established based on the contractor's cost estimate for the change.

(a) The adjustment of budgets to reflect negotiations is normally accomplished by revising undistributed budgets, management reserves, budgets established for work not yet started, or a combination of these. The use of undistributed budgets or management reserve generally has the least impact since it does not change budgets already issued and agreed to by the responsible organization.

(b) Because budgets associated with near-term work should be well-planned, retroactive changes to budgets for completed work associated with the change should not be necessary.

(c) The formal negotiation of completed tasks may result in an agreed-upon value different from that used to establish BCWS for these tasks. In this situation, it may be appropriate to adjust BCWS and BCWP retroactively to reflect the negotiated values of the completed tasks.

(2) Adequate records of all budgeting changes should be maintained to provide the basis for reconciliation with original budgets at the priced line item level and for subsidiary budgets at the lowest level of the DoD project summary WBS as a minimum.

b. Internal Replanning. It may be necessary to perform other replanning actions within the scope of the authorized contract to compensate for cost, schedule, technical problems, which have caused the original plan to become unrealistic; require a reorganization of work or people to increase efficiency of operations; or require different engineering or manufacturing approaches than originally contemplated.

(1) Due to the importance of maintaining a valid baseline for performance measurement, such changes should be accomplished in a systematic and timely manner and must be carefully controlled. Many such changes can be handled within the budget and schedule constraints of cost accounts. Other changes may require the application of management reserves to cost accounts to cover additional costs anticipated as a result of the changes. All changes which affect cost account budgets or include significant schedule revisions, which impact on the time-phasing of the performance measurement baseline, should be brought to the attention of the DoD procuring activity in applicable contractually required reports. This requirement is not intended to reduce contractors' flexibility in the management of their resources, but is intended to assist all users of the data produced from the management systems in understanding and interpreting these data correctly.

(2) If the contractor proposes a change to budgets for completed or in-process work, the contract administration office (CAO), in conjunction with the

procuring activity, should promptly and thoroughly evaluate the proposed change and its effect on performance measurement. This review should occur before the procuring activity approves the change. The agreement with the contractor should address the specific adjustments to be made and the time period during which the change will be implemented (paragraph 3-6d(7).

(3) It is unusual to close work packages prior to their being completed. However, if closure is authorized, then the only acceptable method of closing uncompleted work packages is to set the BCWS equal to the BCWP earned to date (never vice versa); and subtract that amount from the work package's budget at completion (BAC) to determine the remaining budget which is then handled in accordance with normal replanning guidance. (paragraph 3-3 (i) 3).

(4) When labor, overhead and other rates change, it may be necessary to perform a replanning action. Internal replanning of remaining portions of the performance measurement baseline to account for significant changes in the anticipated rates is desirable, but not mandatory.

c. **Formal Reprogramming**:

(1) During the life of a contract, situations may arise whereby available contract budgets for the remaining work are decidedly insufficient. Consequently, performance measurement against the available budgets becomes unrealistic. Under these circumstances, a requirement may exist for the total allocated budget to exceed the contract budget base, and formal reprogramming may be necessary. As appropriate, formal reprogramming by the contractor may entail: replanning future work; replanning in-process work; or adjusting variances (that is, cost or schedule or both). Such reprogramming allows the contractor to increase the amount of budget for the remaining work to a more realistic amount, adequate to provide reasonable budget objectives, work control, and performance measurement.

(2) A thorough analysis of contract status requiring full coordination between the Government program manager and the contractor is necessary before the implementation and recognition of a total allocated budget in excess of the contract budget base. The contractor must perform a detailed estimate of all costs necessary to complete the contract. Factors to consider in developing the estimate are: the amount of authorized work remaining, the estimated cost of the resources required to accomplish the remaining work and the budget (including management reserve, if any) available for reallocation to the remaining work. If the difference between the estimated cost to complete and the remaining budget is significant, the contractor will notify the procuring activity of the need to increase the remaining budgets and measure subsequent performance against a total contract goal higher than the contract budget base.

(3) Before making a decision as to whether to recognize a baseline over the contract budget base, the procuring activity should consider the following:

(a) The primary consideration should be an analysis of the work remaining and the budget remaining. The fact that a contract is overrun to date and is projecting an overrun at completion is not the most important factor in the decision. Changing a baseline merely to compensate for variances already experienced is inappropriate.

(b) The contract should have at least six months of substantial work remaining after reprogramming.

(c) Reprogramming should not be done more frequently than annually and preferably no more frequently than once during the life of the contract.

(4) If the procuring activity is satisfied that the new baseline represents a reasonable plan for completing the contract, the new goal may be accepted as a basis for future performance measurement. Timeliness is essential in making this determination. Therefore, the procuring activity should take immediate action to evaluate the--

(a) Impact on contract status reporting, such as the effect on cost and schedule variances and the change in the relationship of BCWP to the contract value.

(b) Method to be employed by the contractor in implementing the change; for example, adjustment to variances applicable to completed work, and/or adjustments to work-in-process.

(c) Estimated amount of time required to accomplish the reprogramming and the guidelines for performance measurement during that time.

(d) Effect on other contractual requirements; for example, the status of contractually specified program milestones, the contract share ratio, and the liquidation rates for progress payments.

(5) In formal reprogramming, the changes to baseline budgets must be fully documented and traceable. Internal records and reports should be revised expeditiously and provide appropriate visibility to account for the manner in which contract budgets were changed. If variances are adjusted, the BCWS and BCWP values before adjustment will be retained to ensure traceability. Establishment of management reserve for the reprogrammed effort is acceptable in most circumstances. If deemed necessary, guidance may be obtained from the appropriate focal points identified in figure 4-1.

d. **Baseline Maintenance.** To maintain the validity of the performance measurement baseline, contractor

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discipline is mandatory throughout the organization, particularly in regard to budgetary control. Contractors' written internal procedures should clearly delineate acceptable and unacceptable budget practices. These should include the following:

(1) Budgets are assigned to specific segments of work (CWBS elements, cost accounts, planning packages, and work packages).

(2) Work responsibility should not be transferred from one performing organization to another, or from one cost account to another without transferring the associated budget.

(3) A budget assigned to future specific tasks should not be used to perform another task, regardless of the CWBS level involved.

(4) When management reserves are used, records should clearly indicate when and where they were applied.

(5) When undistributed budgets exist, records should clearly identify their amount, purpose, and level at which held.

(6) Budgets which are assigned to work packages should not be changed once they are started unless the scope of work is affected by contractual change, or other reasons agreed to by the contracting parties.

(7) Retroactive changes to budgets or costs for completed work or to schedules are not made except for correction of errors or normal accounting adjustments, (including revisions to budgets to reflect the formal negotiated value of completed tasks.)

(8) Retroactive adjustments to BCWP based on substantiated work status to reflect more correctly the actual accomplishment may be appropriate. (However, widespread use of such adjustments due to erroneous BCWP would indicate unacceptable problems in the contractor's planning and control methods. Such widespread adjustments will require the contractor to review internal techniques for establishing BCWS and BCWP to minimize future requirements for such adjustments.)

Chapter 4

DOD COMPONENT RELATIONSHIPS

4-1. General Information. As noted in paragraph 1-3, representatives of various DoD components participate in C/SCSC implementation. Besides major organizations within the military departments, DCAA and DLA/DCAS are included. This chapter explains responsibilities of various representatives concerned with implementation of the criteria contained in chapter 2 and discussed in chapter 3. Implementation procedures are explained in chapter 5. Chapter 6 describes contract administration and audit functions.

4-2. Terms Explained. Several terms are used with reference to various activities responsible for criteria implementations. When applied to specific efforts, these terms are intended to describe functions rather than organizations. Each DoD component may assign different designations consistent with internal operations to accomplish responsibilities associated with these terms. For example, figure 4-1 indicates which organizations usually perform functions described in this publication. Significant terms used for this purpose are described below.

a. **DoD Component.** The overall responsibility for implementation of the criteria within each DoD component is assigned to the designated focal point for C/SCSC responsibility; for example, AMC, ASN (S&L), AFSC. When two or more DoD components have collateral interest in application of criteria by a specific contractor facility, one is designated as the lead to organize C/SCSC review activities and provide liaison with DCAA and DCAS as well as other applicable DoD components through focal points described in c below. Various factors considered in designation are--

(1) When a new contractual requirement involving criteria implementation exists or is imminent, the component responsible for the applicable procuring activity is the lead.

(2) When no new contractual requirement exists or is imminent, the major component having cognizance for contract administration will function as the lead.

(3) When there is any question about designation of the lead component regarding a specific contractor facility, the designation will be accomplished by mutual agreement through established focal points.

b. **Procuring Activity.** This term usually identifies the subordinate organization where the procuring contracting office is located. It includes the program office and related functional support offices. Examples of C/SCSC focal points and procuring activities are AFSC/ASD; AFCC/ASPO; AFLC/OCALC; AMC/MICOM; and ASN(S&L)/NAVSEASYSCOM.

c. **Focal Points.** DoD components have established focal points to serve as the principal points of contact for coordination and exchange of information on implementation of the criteria. The focal point is concerned at a policy level with establishment of contract provisions, the memorandum of understanding, the letter of acceptance, and surveillance of procuring command implementation of policy guidance. Usually, focal points within the lead organization are directly responsible for--

(1) Directing the overall organization of teams, scheduling reviews, and maintaining liaison with other DoD component focal points.

(2) Reviewing and approving major changes (that is, those requiring interpretation of the criteria) to accepted systems.

d. **Executive Group.** The Performance Measurement Joint Executive Group provides uniform policy guidance and a forum to arbitrate any matters concerning C/SCSC reviews and other C/SCSC matters that cannot be resolved amicably through established focal points. This group is expected to solve problems before they reach such magnitude that they would be referred to the Joint Logistics Commanders individually or collectively. Officials designated to serve on the group represent the following:

(1) Chief of the Contract Cost Performance Division, Deputy Chief of Staff for Resource Management, HQ Army Materiel Command.

(2) Head, Contracts and Business Management, Assistant Secretary of the Navy (Shipbuilding & Logistics).

(3) Director of Cost (ACC), DCS/Comptroller, HQ Air Force Systems Command.

(4) Appropriate DoD components or program representative when a program is involved which is not under the staff supervision of AMC, ASN (S&L), or AFSC.

(5) HQ DCAA and DLA/DCAS as appropriate.

(6) Office of the Assistant Secretary of Defense (Comptroller), (Ex-officio).

e. **Contract Administration Office.** This is the cognizant office which is assigned to administer contractual activities at a specific facility. It is a general term and includes AFPROs, NAVPROs, SUPSHIPs, ARPROs, DCASRs, DCASMAs, DCASPROs, and CACOs. The cognizant CAO may be part of the procuring activity or may be part of DLA when DCAS is assigned responsibilities for plant cognizance. The focal point in DLA concerning criteria implementation is the Systems and Engineering Division, Executive Director for Contract Management, Defense Logistics Agency. Additional guidance regarding CAO functions is provided in paragraph 6-2.

f. **Contract Auditor.** This is the representative of the cognizant audit office designated by the DCAA for conducting audit reviews of the contractor's accounting

Function	Army	Navy	Air Force
DoD Component*	AMC	ASN(S&L)	AFSC AFCC AFLC
Procuring Activity	Major subordinate commands	NAVSYSCOMS	Major subordinate commands
C/SCSC Focal Point**	AMCRM-K[1]	ASN(S&L) CBM[2]	AFSC/ACC[3]
Performance Measurement Joint Executive Group	AMCRM-K[1]	ASN(S&L) CBM[2]	AFSC/ACC[4]
Contract Administration Office (CAO)	DCAS/ARPRO/NAVPRO/SUPSHIPS/AFPRO/AFCMC		

* One Service focal point will serve as lead during a C/SCSC review.

** In DLA the focal point is DLA-AE. The cognizant audit office maintains liason for DCAA.

1 Chief of Contract Cost Performance Division, Deputy Chief of Staff for Resource Management, HQ Army Materiel Command.

2 C/SCSC Focal Point Office, Acquisition Oversight Division, Contracts and Business Management Directorate, Assistant Secretary of the Navy (Shipbuilding & Logistics).

3 Directorate of Cost, Headquarters Air Force Systems Command. Overall Air Force coordination/liason is provided by AFSC/ACC.

4 HQ Air Force Systems Command/ACC serves as the overall Air Force focal point.

Figure 4-1. Functional Responsibilities of Selected Organizations.

system policies and procedures for compliance with the criteria. The auditor participates in demonstration reviews as well as subsequent surveillance. In DCAA the focal point is DCAA, Audit Programs Division.

4-3. C/SCSC Review Teams. The procuring activity of the lead component will organize a team of qualified individuals to conduct in-plant reviews of the contractor's management control systems. The purpose of these reviews is to verify that the contractor is operating systems which meet the criteria.

a. **Team Composition.** The DoD component focal point will approve the apppointment oí the review director and team chief, and will inform other DoD component focal points of those appointments; and, in cases where it is appropriate, will request them to identify representatives with pertinent qualifications to serve as team members. As soon as a review schedule is developed the lead DoD component will apprise all participants. The team functions are--

(1) Review Director. The director is usually located in the component focal point office. The director will supervise team efforts in collaboration with representatives from systems commands, major subordinate commands. field activities , and other DoD components selected to work with each C/SCSC review team. The director may be concerned with more than one team simultaneously, and will furnish policy, guidance, liaison with other focal points, and interpretation of the criteria to the team chief and team members.

(2) Team Chief. The team chief is usually selected or designated from within a lead component subordinate organization (for example, MICOM for AMC; NAVSEASYSCOM or NAVAIRSYSCOM for ASN (S&L); ASD or SD for AFSC; SSC for AFCC.) The team chief will organize the team and lead team members in reviewing the application of the criteria by a specific contractor. The team chief reports to the review director, and seeks liaison with other DoD components

through the review director.

(3) Team Members. Teams will be composed of qualified representatives from DoD component focal point offices or from applicable major subordinate organizations; particularly, the office of the program manager, applicable functional offices, as well as the cognizant CAO, and the cognizant resident or branch audit office. The team chief supervises assigned members during the course of the C/SCSC reviews. The assigned auditor will obtain technical advice from the audit supervisor as necessary.

b. Operation of Team. The team is responsible for a rigorous assessment of the contractor's compliance with the criteria. Such assessment should include review of management control techniques used by contractor organizational elements which perform work on the contract. Additional guidance is contained in chapters 5 and 7.

(1) Members will be responsible to the team chief for the completion of their assignments. To the extent possible, the team chief assigns tasks consistent with background qualifications of team members. However, the team chief will retain the prerogative, with the approval of the review director, to select and use any professional skills and methods considered necessary to accomplish an assignment adequately.

(2) Members should be full-time participants during C/SCSC reviews. However, the team may be augmented with functional specialists to assist in specific aspects of a review.

(3) Team size and types of expertise of members will be determined by the requirements; for example, the type of review, contract size, contractor characteristics, and program characteristics.

c. Qualifications of Members. Normally, members should possess one or more of the following qualifications:

(1) Knowledge of the technical content of the program or contract.

(2) Knowledge of the principal engineering design and test requirements of the activity under review.

(3) General industrial engineering/production control background.

(4) Accounting/auditing knowledge.

(5) Program planning and control experience.

(6) Management analysis and/or cost/price analysis experience.

(7) Contract negotiation or administration experience.

d. Training. All members should receive specialized training, dealing with management control systems concepts and performance requirements and interpretations before participating as team members. Formal training, such as that given in the Air Force Institute of Technology (AFIT) Course 362, Cost/Schedule Control Systems Criteria is a requirement that normally will not be waived. Such training should be supplemented by additional instruction to ensure the fullest comprehension of the task to be performed during the demonstration review. On-the-job training will be provided, when feasible, to enlarge upon background experience and classroom training for members without prior demonstration review participation.

4-4. Review Techniques:

a. Checklist. Appendix E provides a checklist for use by the team members in the examination of the contractor's management control systems to ensure conformance. The checklist includes a restatement of criteria followed by specific questions or areas to be addressed by the review team.

b. Formats. To clarify checklist items, formats should be developed as illustrations during the review. Appendix F provides typical formats for displaying team findings and supporting conclusions drawn.

4-5. Coordination:

a. Advance Planning. The focal point in the leading DoD component will inform focal points in other DoD components as far in advance as possible concerning the starting date and estimated duration of the review. Applicable focal points will then inform the lead component focal point for coordination as to whether they intend to participate in the review. If so, they will identify their representatives for the review team.

b. Administration:

(1) The team chief will make all necessary arrangements ensuring availability of team members for the time required for preliminary indoctrination and each review for which a team member is needed. Members will be administratively responsible to the team chief during the period of the review.

(2) If another review is necessary to determine the correction of observed deficiencies, or to cover another phase of the program, the same members should be reassembled if possible.

Chapter 5

COST/SCHEDULE CONTROL SYSTEMS CRITERIA IMPLEMENTATION PROCEDURES

5-1. General Information:

a. Policy. It is the general policy of DoD procuring activities to require--

(1) Application of the C/SCSC to programs that are within the scope outlined in paragraph 2-2.

(2) No changes to contractors' existing management control systems except those necessary to meet the criteria.

(3) The contractor to use data from its own management control system(s) in reports to the Government.

b. Circumstances. When it has been determined that the criteria will be applied to a specific major system acquisition, generally it will be as--

(1) A requirement within a new contract(s), usually first expressed in a solicitation document (paragraph 5-2a), or

(2) A requirement of an existing contract(s), subject to bilateral agreement between the contractor and the Government.

c. Review Type. In determining the type of C/SCSC review (development or production) to be accomplished, the following issues should be evaluated:

(1) The type of funding should be considered, but it should not override other considerations.

(2) If the manufacturing effort in the contract is not true manufacturing (e.g., model shop work) and there is no major difference in the way cost data are collected from the method used for the engineering effort, then the C/SCSC review can be based on the application of a development system.

(3) If the preponderance of discrete effort in the contract is identified as either engineering or manufacturing, then the identification of the C/SCSC review as development or production should be self-evident.

(4) If there is little or no manufacturing effort (e.g.,contracts for long-lead items, engineering services, or production planning), the contractor can apply either an accepted development or an accepted production system regardless of funding.

d. Phasing. Since the contractor's management control systems utilized during development and during production are usually significantly different from each other, normally separate demonstration reviews will usually be required for the development phase and production phase. The contractor may request a simultaneous review of the systems used for both development and production contracts (or a contractor may have one system for both development and production contracts), thus obviating the necessity for successive reviews. However, the production system demonstrated to gain acceptance should be of such extent that its review will demonstrate its applicability to production contracts that warrant the imposition of the C/SCSC.

e. Review Cycle. The checklist and guidance in this guide will be used by DoD representatives for evaluation of contractors' proposals concerning C/SCSC implementation and for conducting an in-plant demonstration review of a contractor's management control systems after a contract is awarded. They may also serve as references for the contractors in preparing descriptions of the management control systems. Contractors are encouraged to follow the criteria and checklist when preparing descriptions so as to provide for more effective assessment by DoD representatives. The phases of a typical review cycle include evaluations preliminary to contract award (paragraph 5-2c), an implementation visit after contract award (paragraph 5-4a(1), readiness assessment after the implementation visit (paragraph 5-4a(2), and the in-plant demonstration review leading to official acceptance (paragraph 5-4b). A redemonstration review may be scheduled when it is necessary to examine any changes made by the contractor after deficiencies are identified (paragraph 5-4d). After acceptance, the review process continues as a surveillance function (paragraph 6-1c(2), 6-2a(3), and 6-3b). Figure 5-1 shows typical phases of C/SCSC implementation.

5-2. Preaward Actions. Preaward acquisition documents should be reviewed to ensure that C/SCSC and related reporting are properly included when appropriate.

a. Solicitation. When it is determined that the criteria will be implemented on a new contract, they will be included as a requirement in the solicitation document. The DFARS clause used for this purpose is in appendix A.

b. Proposal. In response to the solicitation, each contractor's proposal should include a description of the management control systems to be used to meet the requirements of the criteria under contract. The contractor may propose to use the existing systems which in the contractor's judgment meet the criteria. Upon receipt of notification in the proposal that the contractor will apply the accepted system to a pending contract, the procuring activity will inform the DoD component C/SCSC focal point of the contractor's proposal response.

(1) The description of the contractor's management control system must be presented in sufficient detail to describe compliance with the criteria, and to permit adequate surveillance of the operational systems by the cognizant DoD components. The

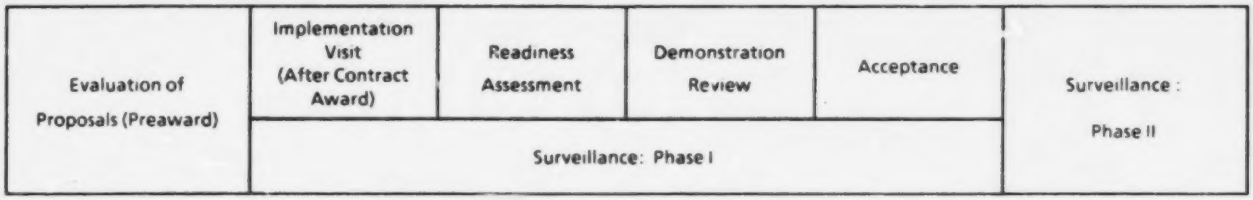

Figure 5-1. Typical Phases of C/SCSC Implementation.

contractor must also clearly show how the systems meet each of the criteria in chapter 2. While the contractor's system description is not required to follow the evaluation/demonstration review checklist (appendix E) the description must address all items in the checklist. The contractor should correlate checklist items with applicable portions of the system description to ensure adequate coverage (appendix A).

(2) When a contractor chooses to keep the C/SCSC system description general, and rely on cross-referencing to internal procedures or policy manuals for a discussion of the details, the procedures and policy documents are to be referenced in and considered a part of the system description, from a control and revision standpoint. In specific instances only portions of the referenced documents may be C/SCSC related from a control and revision standpoint. In these cases, the contractor and the local Contract Administration Office (CAO) may develop control procedures that will permit changes to the non-C/SCSC related portions of those documents without submittal to the CAO for approval. This will require the contractor to identify, in the system description those specific sections or portions of the internal documents that are related to the contractor's cost/schedule control system and require ACO approval of any change or deletion.

(3) A contractor proposing to use management control systems previously accepted may satisfy the criteria requirement in the solicitation document by citing in the proposal the memorandum of understanding (paragraph 5-6) or notification of acceptance.

c. **Evaluation.** Normally, for a new program the evaluation review is accomplished as a part of precontract award procedures. It is the process of evaluating proposed or existing systems and methods by which the contractor plans to comply with the criteria. The review is basically an analysis of the contractor's management control systems proposed in response to the criteria prescribed in the solicitation. The review will include use of applicable parts of the checklist (appendix E). If a contractor has proposed to use a previously accepted system, the cognizant CAO and resident auditor will furnish a report stating whether or not the contractor's system still meets the criteria.

d. **Onsite Examination.** Normally, an onsite examination of the contractor's systems in operation will not be required during the evaluation review. However, when any part of the system is not clearly understood, an onsite examination of that part may be necessary to clarify the contractor's intent. If an onsite review is necessary, approval of the activity responsible for source selection will be obtained. The procuring activity will formally notify the cognizant CAO and the resident auditor of the requirement as far in advance as possible. The CAO and DCAA will each provide a representative to assist in the onsite review. The lead command focal point should provide advice and assistance as required. Care should be exercised during the entire evaluation review process to ensure that the contractor and DoD have the same understanding of the system described in the contractor's proposal. Data examples using actual data in the case of existing systems, should be provided to illustrate systems procedures and data flow.

e. **Coordination.** During an onsite evaluation, if it is found that the contractor's proposed system is in use under a contract with another command, coordination with the other command should be maintained during the evaluation review process. If it becomes necessary to review actual plans and reports of the other command's contract, concurrence of the other command should be obtained.

f. **Proprietary Information.** Care must be exercised to avoid improper disclosure of information obtained from contractors, especially in competitive situations, when an onsite evaluation is being made in which the degree of compliance with performance measurement criteria is a factor in contract award.

g. **Evaluation Report.** Following the evaluation review, a written report will be prepared by the evaluation review team which will attest whether or not the contractor's system description in the proposal adequately describes compliance with the criteria. If not, the report will identify specific deficiencies. The reports will be provided to the Source Selection Evaluation Board.

5-3. Contracts:

a. **Provisions.** The contract will require that the contractor's systems comply with the criteria throughout performance of the contract. The applicable DFARS clause is in appendix B. It covers the requirements of the criteria and other conditions as follows:

(1) Requires the contractor to establish, demonstrate, and use management control systems which meet the criteria.

(2) Requires the contractor to obtain approval of changes affecting the accepted management system description before implementation.

(3) Provides for Government access to pertinent records and data associated with the management control systems.

(4) When mutually agreed to by the procuring activity and the prime contractor, the criteria will be applied to selected subcontractors, based upon such factors as criticality to program. In these cases, the prime contractor will contractually require subcontractors to comply with the criteria. Subcontracts selected for application of the criteria should be identified in the prime contract.

(a) After a prime contractor has reviewed and accepted a subcontractor's management control system, the prime contractor should provide the subcontractor a written statement that documents the acceptance. Such acceptance does not constitute DoD acceptance and does not apply to DoD contracts or subcontracts from prime contractors on other DoD programs.

(b) Review and acceptance of these selected subcontractors' management control systems may be performed by the procuring activity in coordination with the prime contractor when requested by either the prime contractor or subcontractor. Such review and acceptances will be accomplished in accordance with paragraph 5-4.

b. Prior Acceptance. Contractors whose management control systems were accepted for application to another contract of the same type (for example, development or production) at the same facility will not be required to undergo a demonstration review on a new contract unless significant modifications have been made to the previously accepted systems, or surveillance reveals that the accepted systems have not been operated as contractually agreed to in the prior contract. Prior acceptance will be withdrawn if deficiencies are not corrected. This applies to all accepted systems, whether or not covered by a memorandum of understanding (paragraph 5-6).

c. Subsequent Application Review. When a contractor has a previously accepted system, a subsequent application review should be conducted in conjunction with a newly awarded contract with a C/SCSC requirement in the same facility. The contractor is expected to be ready for this type review within 90 days after contract award. This type of review is to determine that the contractor has properly applied the previously accepted management control system to the new contract. The team composition and duration for the subsequent application review should be minimized. See chapter 7 for specific guidance.

d. Extended Subsequent Application Review. When a contractor has a previously accepted system but wishes to extend it from one program phase to another (development to production or production to development) or from one facility to another, or when the contractor has accomplished an extensive revision to the system description, an extended subsequent application review may be deemed appropriate by the DoD component focal point. The contractor is expected to be ready for this type of review within 90 days after contract award. This type review is to determine that the contractor has properly extended the previously accepted management control system in accordance with the criteria and is applying a criteria-compliant system to the new contract. Team composition and duration for the extended subsequent application review should be minimized. See chapter 7 for specific guidance.

5-4. Demonstrations:

a. Preliminary Actions:

(1) Implementation Visit. As soon as possible after contract award, preferably within 30 days, representatives of the C/SCSC review team should visit the contractor's plant and review the contractor's plans for implementing the C/SCSC. Areas of noncompliance or potential problems will be identified. This visit provides an early dialogue between the lead command and the contractor relative to the C/SCSC review process. During this preliminary review the contractor will usually make presentations to reflect the systems' design and operation and explain applicable reports. The team will examine selected documents and procedures proposed by the contractor. During the visit, the schedule will be developed for the readiness assessment and full-scale demonstration review.

(2) Readiness Assessment. The readiness assessment is a meeting or series of meetings, usually three to five days duration, held by representatives of the team with the contractor before the full-scale demonstration review. Without involving the time and expense of the full Government and contractor teams, it provides an opportunity to review contractor progress toward implementing the criteria, to clear up misunderstandings, and to assess the contractor's readiness to demonstrate a fully integrated management control system. It assists in the Government's preparation for the full-scale demonstration review by familiarizing key team members with the fundamentals of the contractor's systems. Any discrepancies should be identified to the contractor for correction. Team members should not design or recommend changes to systems to meet the criteria. The contractor will be afforded an opportunity to correct deficiencies.

b. Demonstration by the Contractor. When a demonstration review is required, it will begin as soon

as practicable following the contractor's implementation of the management systems pertinent to the contractual effort. The C/SCSC review team will examine the contractor's working papers and documents to ascertain compliance and document its findings. For this purpose, the contractor will be required to make available to the team the documents used in the contractor's management control systems; for example, budgeting, work authorization, accounting, and other functional documents which apply to the specific contracts being reviewed. The documentation must be current and accurate.

(1) The contractor will demonstrate to the team how the management control systems are structured and used in actual operation. The contractor will make available all appropriate internal planning and control documentation required for an indepth analysis of the adequacy of the system in relation to the criteria and the work under contract.

(2) The contractor should have current written descriptions available which describe the management control systems. Applicable portions of the systems descriptions and operating procedures must also be available at the contractor's operating levels. Detailed operating procedures should delineate the following: Responsibilities of operating personnel, limitations on action, and internal authorization required.

c. Compliance with Criteria. The burden of proof for demonstrating compliance with the criteria necessarily rests with the contractor. The C/SCSC review team will assess compliance with the criteria.

d. Corrective Actions. If the contractor's systems are not acceptable, corrective actions to achieve compliance with criteria must be initiated by the contractor. Areas to be reexamined will be clearly identified to the contractor. A schedule for developing solutions and for a subsequent demonstration review to determine acceptability will be agreed upon by the contractor and review director.

e. Review Process:

(1) The team will follow the evaluation/demonstration review checklist (appendix E) to assist members in completing an orderly, comprehensive and conclusive review. The team may employ sampling techniques when it is not practical to review entire systems. Generally, the team will proceed in any given area until conclusive findings are reached. Based upon the best judgment and counsel available, the team chief will identify the cutoff point in any test after sufficient evidence has been obtained on which to base conclusive findings.

(2) The evaluation of a contractor's indirect cost control system is within the purview of the cognizant plant representative and the DCAA; the responsibility for ensuring that these systems are in compliance with the C/SCSC is normally assigned to their representatives on the demonstration review team. If the DCAA auditor has accomplished a recent evaluation of the indirect cost control system that verifies compliance with the criteria, a second investigation during the demonstration review is normally not required. Conversely, if the DCAA has not recently evaluated the indirect cost control system, this must be done as part of the demonstration review.

(3) The prime contractor is responsible for the review and acceptance of each subcontractor's management control system that requires application of C/SCSC unless the Government has accepted the responsibility as a result of a request from either the prime or subcontractor for the Government to perform that review. When the prime still maintains that responsibility, the Government may hold open the review of the prime for the failure of the prime to review and accept the subcontractor's management control system adequately. A service focal point may choose to close out the review of the prime, even though the prime has not reviewed and accepted the subcontractor's management system for reasons such as "subcontract not defined" or "not enough work completed to date to evaluate the subcontractor's system." In these cases, the Government team must determine, as a minimum, that the prime's procedures for review of subcontractor's cost/schedule control systems are adequate and that the plan for subcontractor C/SCSC compliance is adequate. The Government CAO may then be required to confirm later that the prime has properly determined subcontractor C/SCSC compliance as a Phase II surveillance item, or a follow-up review by the Government team may be planned.

f. Acceptance.

(1) Formal Report. At the conclusion of the demonstration review, a formal C/SCSC review report will be prepared and submitted to the review director within 15 working days after completion and approval of all corrective actions. Appendix C discusses in detail the format and content of the report.

(a) Preparation of the demonstration review report is the responsibility of the team chief.

(b) The report will state whether the contractor's system complies with the criteria. If it does not comply, the report will identify the areas of noncompliance in detail.

(c) Requirements and deadlines for preparing drafts of various sections of the report may be delegated to individual team members. A draft of the report should be made available for review by team members.

(d) Any significant disagreements on the final wording or content of the report will be referred through appropriate channels for resolution, as described in paragraphs 1-4, 4-2c, and 4-2d.

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g. **Procedures.** The demonstration review report will be the basis for acceptance of the contractor's management control systems by the DOD components.

(1) All demonstration review reports will be subject to review by the lead component focal point for coordination with the C/SCSC component focal point responsible for conducting the demonstration review. C/SCSC review reports will be offered by the lead service to the other military service focal points for coordination before release.

(2) The appropriate contracting officer will inform the contractor regarding acceptance or nonacceptance of the systems and provide the contractor with copies of the report when released by the review director.

(3) The contractor will provide a description of the accepted management systems according to appendix B, paragraph (b). A memorandum of understanding (paragraph 5-6) may be used to satisfy the requirements of describing accepted systems.

h. **Report Distribution.** The lead focal point for coordination will control the issuance and distribution of the reports. When applicable, the cover page of each report will contain a statement indicating that the report contains contractor proprietary data, and that distribution of copies will be limited. Contents will not be disseminated outside DoD, in whole or in part, without the express permission of the cognizant service focal point and the contractor.

5-5. Compliance after Acceptance:

a. Acceptance of a contractor's management control systems as meeting the criteria is not intended to inhibit continuing innovations and improvement of its systems. However, contractors are contractually obligated to maintain their systems in a state which satisfies the criteria.

b. Surveillance to ensure that contractors properly maintain their systems is a DoD management responsibility which will be accomplished by the cognizant CAO and DCAA auditor. Indications that a contractor's system is failing to comply with any part of the criteria can be cause for scheduling another demonstration review and may result in revocation of prior acceptance. Specific discrepancies discovered as a result of the demonstration review or normal surveillance procedures should be corrected immediately. Surveillance responsibilities are described in chapter 6 and in more detail in the C/SCSC Joint Surveillance Guide.

c. Contractor-proposed changes to accepted management control systems will be submitted to the cognizant CAO in accordance with the C/SCSC Joint Surveillance Guide.

5-6. Memorandum of Understanding:

a. **General.** After demonstration and acceptance of a contractor's management control systems, the contractor's system description should be updated as necessary to describe accurately the system as accepted. Since complete descriptions may be voluminous, consideration should be given to preparing them in a format which may be referenced or summarized for use in related documents. A memorandum of understanding (referencing the description of the accepted systems) may then be executed relative to the application of those accepted systems to contracts which require compliance with the C/SCSC. Pertinent features of the memorandum of understanding (appendix D) are described below:

(1) The memorandum of understanding is not a contract clause, but it may be incorporated in any contract by appropriate reference when the contract includes a requirement for compliance with the criteria.

(2) This document serves to clarify intent of the contractor and DoD components relative to implementation of the criteria. It contains reference to a description of accepted systems and subsystems; it identifies facilities and locations; and provides for Government access to pertinent contractor records and data for surveillance purposes. Provision is also made to permit changes to accepted systems.

(3) A memorandum of understanding may be executed after the contractor's management control systems are applied to a single contract containing the criteria requirement or it may be developed without an existing or pending contractual requirement when requested by the contractor or DoD, provided that a demonstration review is accomplished through mutual agreement.

(4) If a request for a memorandum of understanding is processed without an existing or pending contractual requirement, it will be necessary to designate the lead command (paragraph 4-2a). Applicable demonstration reviews may involve any contract in the facility where performance measurement systems are applied, provided that the contracts selected will ensure that a representative appraisal of the contractor's system is made.

(5) When a memorandum of understanding is to be consummated between the DoD components and the contractor, such a memorandum will be prepared and executed by the appropriate ACO, based upon the demonstration review report and letter of acceptance.

(6) A memorandum of understanding will normally be limited for application to a single contractor facility as defined for the purpose of contract administration and may be limited as to application to development or production contracts.

(7) A contractor may respond to solicitations for potential contracts by citing the memorandum of understanding in the proposal. Procuring activities may evaluate the current status of implementation of criteria by the contractor to ensure themselves that

applicable systems are acceptable without requesting a full-scale demonstration review (paragraph 5-3c).

b. **Procedures.** In the execution of a memorandum of understanding, the following procedures will apply:

(1) A contractor desiring a memorandum of understanding will direct a written request to the cognizant CAO.

(2) The CAO will forward the request to the lead component focal point for coordination.

(3) A contractor requesting a memorandum of understanding subsequent to acceptance under an existing or previous DoD contract will make this known to the CAO. The CAO will coordinate the request with the lead component focal point. The other military departments will be asked to review the contractor's system either through review of the C/SCSC demonstration review report or a joint service subsequent application review. Following agreement, a memorandum of understanding will be executed as set forth above.

(4) The memorandum of understanding should be distributed to each military department, CAO, DCAA, contractor, and other appropriate addressees.

Chapter 6

CONTRACT ADMINISTRATION AND AUDIT

6-1. General Information:

a. Scope. This chapter describes the responsibilities of the cognizant CAO and the resident DCAA auditor for the review and surveillance of C/SCSC management control systems (paragraphs 6-2 and 6-3). With the commencement of contract performance, contractors are expected to operate management systems which have been proposed and evaluated prior to contract award. Surveillance is a DoD management responsibility to be carried out at each contractor's facility to ensure the contractor complies with the requirements of the executed contract. Uniform guidance for the DoD components performing this surveillance is contained in the C/SCSC Joint Surveillance Guide.

b. Time Span. Following award of the contract, the contractor's management control systems may be in various stages of implementation. The surveillance function will begin immediately following contract award. Continuing surveillance will be directed toward the procedures and functions of the contractor's management control systems. During surveillance, if the description of the systems identified in the contract is found to differ from the contractor's practices, the procuring activity must be promptly informed.

c. Phases of Surveillance. Surveillance consists of two phases. The first is applicable immediately after contract award, the second following the demonstration review (figure 5-1).

(1) Phase I. This phase is directed to assisting the procuring activity and monitoring the progress of the contractor to ensure satisfactory implementation of the contractor's management control systems. The cognizant CAO and contract auditor will provide team members for the C/SCSC reviews and assist the DoD procuring activity in monitoring remedial actions to meet the criteria. During this period, even though the contractor's systems have not yet been accepted, it is necessary that the procuring activity make decisions based upon contractor reports derived from the currently operating management control systems. Thus, it is necessary to verify that the data contained in the reports submitted are in accordance with contractual requirements and are valid and complete.

(2) Phase II. Immediately following acceptance of the contractor's management control systems, surveillance should be formalized to include a comprehensive program covering the complete scope of the criteria. Such a program should provide for verifying, tracing, and evaluating the information contained in the reports submitted to DoD procuring components. It also should ensure that the contractor's management control system continues to operate as accepted and that any proposed or actual changes comply with the criteria and are reflected in the contractor's system description.

6-2. CAO Functions and Responsibilities. The cognizant CAO will--

a. During Phase I--

(1) Provide a C/SCSC review team member to assist the DoD procuring activity by monitoring contractor progress during the implementation process.

(2) Consummate a memorandum of agreement with the Government program office to ensure all participants understand their surveillance responsibilities.

(3) Prepare a surveillance plan, using the written description of the systems provided by the contractor and referenced in the contract. The assistance of the contract auditor should be obtained in respect to that part of the program concerning financial data. The written surveillance program plan will be submitted by the cognizant CAO to the DoD procuring activity for concurrence.

b. During Phase II--

(1) Implement the surveillance plan which will assess continuity and consistency in the operation of the contractor's systems.

(2) Evaluate any formal or informal changes in the management systems to determine whether such systems continue to comply with the criteria and contract provisions. The purpose is to detect and appraise alterations which are not in accord with the criteria.

(3) Perform recurring evaluations of the effectiveness of the contractor's policies and procedures, selective tests of the contractor's internal data flow, and validations of external reports submitted to the Government.

(4) Forward to the contract auditor a list of all reports submitted in response to DD Form 1423, Contract Data Requirements List, which require audit verification of financial data.

(5) Verify that the contractor's systems continue to comply with the criteria and contract provisions.

(6) Apprise the contractor and DoD components of any deficiencies in the contractor's management control systems. Determine whether corrective actions taken have remedied such deficiencies.

(7) Advise the contractor and the concerned DoD procuring activity of any uncorrected deficiencies which affect the overall acceptability of contractor's systems.

6-3. DCAA Functions and Responsibilities. The cognizant DCAA audit office will provide an auditor who will--

a. During Phase I--

(1) Serve as a C/SCSC review team member for the review of the accounting system and related financial areas, including budgeting, direct and indirect costs, variance analysis, and forecasting.

(2) Participate in monitoring contractor progress in assigned areas during C/SCSC implementation.

b. During Phase II--

(1) Perform reviews of the contractor's accounting system policies and procedures for compliance with performance measurement criteria and contract provisions.

(2) Perform periodic reviews, on a selective basis, of the financial data contained in the various reports prepared by the contractor to determine whether they accurately reflect the information in the contractor's books and records.

(3) Perform periodic evaluations of the contractor's financial policies and procedures.

(4) Prepare audit reports incorporating deficiencies, disclosed during surveillance reviews that cannot be resolved with the contractor. Such reports should be addressed to the procuring activity through the cognizant CAO.

Chapter 7

POST- ACCEPTANCE REVIEWS OF COST/SCHEDULE CONTROL SYSTEMS

7-1. General Information:

a. Purpose. This chapter provides guidance on conduct of reviews of lesser magnitude that follow the demonstration review, as well as guidance in the preparation for and performance of these post- acceptance reviews. The reviews include the subsequent application review, the extended subsequent application review, and the baseline review.

b. Importance. The C/SCSC subsequent application review and the extended subsequent application review are major means of assuring continued use of a C/SCSC compliant management system. Although not as comprehensive as the initial demonstration review, the subsequent reviews are of equal importance to the continued successful implementation of the C/SCSC approach and its credibility. Post-acceptance review findings and recommendations are of consequence to the Army, Navy, and Air Force, as well as to other DoD components that may be doing business with a particular contractor. Uniformity of application and consistency of interpretation are advantageous both to DoD and to the contractor.

7-2. Subsequent Application Review:

a. Definition. A C/SCSC subsequent application review is a formal review performed in lieu of a C/SCSC demonstration review when compliance with the DoD Cost/Schedule Control Systems Criteria is a requirement in a contract (DFARS 52.234-7001) at a facility where the management control system has been accepted for the same type of contract (e.g., development or production). Because the intent of conducting a subsequent application review is to minimize unnecessary repetition of work previously performed in the demonstration review, the length and scope of a subsequent application review are limited.

b. Objective. The objective of a subsequent application review is to ensure that, on a new contract, the contractor is properly and effectively using the accepted system, revised in accordance with approved changes. It is not the purpose of the review to reassess the contractor's previously accepted system.

c. Basis for Application. At the same facility subsequent application reviews will normally be required in connection with new contracts which require C/SCSC where the work is to be performed at a facililty whose management control system has previously been accepted on another contract of the same type (that is, development, production). Where there is a production option on a development contract, a subsequent application review (or a demonstration review if there is no accepted production system) will normally be required when work on the production option begins. Where the contract is a follow-on contract for the same (or almost the same) item at the same facility, the subsequent application review requirement may be waived on recommendation to the contracting officer by the focal point.

d. Contractual Requirement. DFARS Clause 52.234-7001 Cost/Schedule Control Systems, requires that the contractor be prepared to demonstrate that the contractor's management control system meets the criteria (C/SCSC). The clause also provides that "If the contractor...is utilizing Cost/Schedule Control Systems which have previously been accepted,...the Contracting Officer may waive all or part of the provisions concerning..demonstration and review" (See DFARS clause, appendix B).

e. Policy.

(1) The subsequent application review will be performed in lieu of a complete C/SCSC demonstration review when--

(a) A contractor or subcontractor is contractually required to apply C/SCSC and is using a management control system which has been previously accepted.

(b) The C/SCSC surveillance monitor in the contract administration office (CAO) confirms that the accepted system has been or is being operated as contractually agreed to in the prior or current contract.

(2) A subsequent application review is normally not considered appropriate--

(a) When an accepted system is being transferred from one facility to another and simultaneously to a different program phase; i.e., development to production or production to development.

(b) When there are major changes to the system description of the accepted system (in the case of its extension to either another program phase or another facility).

(3) When a contractor's facility has an accepted system for the proper acquisition phase, a demonstration review will be required only when determined necessary by the DoD component focal point.

f. Responsibilities. The DoD component focal point has the authority and responsibility concerning the subsequent application review for selection of the review director; approval of type, scope, and extent of the review; and approval of team recommendations.

g. Common Elements of the Subsequent Application Review and the Extended Subsequent Application Review. For a discussion of elements common to the two types of reviews see paragraph 7-4.

7-3. Extended Subsequent Application Review.

a. Definition. A C/SCSC extended subsequent application review is a formal review performed in lieu

of a C/SCSC demonstration review when compliance with the DoD Cost/Schedule Control Systems Criteria is a requirement in a contract (DFARS 52.234-7001). This type review extends a previously accepted system. The extension includes such factors as extending the system from one program phase to another, from one contractor facility to another, or it can extend the validation of a previously accepted system description to a revised system description.

b. **Objectives.** The primary objectives of extended subsequent application reviews are to--

(1) extend the coverage of existing accepted system descriptions; and

(2) assess rewritten or extensively revised and updated system descriptions; and

(3) assure the application of the accepted systems with approved changes.

c. **Basis for Application.** The extended subsequent application review may be conducted under the following conditions:

(1) A previously accepted system is applied in the contractor's facility to a different program phase (e.g., a system previously accepted for development contracts is applied to production, or a system previously accepted for production is applied to development).

(2) A previously accepted system is applied to a different facility of the same contractor for the same program phase (e.g., development or production).

(3) The contractor has accomplished an extensive rewrite or revision of the accepted system description.

d. **Contractual Requirement.** DFARS Clause 52.234-7001 Cost/Schedule Control Systems Criteria requires that the contractor be prepared to demonstrate that the contractor's management control system meets the criteria (C/SCSC). The clause also provides that "if the contractor...is utilizing Cost/Schedule Control Systems which have previously been accepted...the Contracting Officer may waive all or part of the provisions concerning demonstration and review." (See DFARS clause, appendix B).

e. **Policy.** The intent of conducting an extended subsequent application review is to minimize unnecessary repetition of work previously performed in the demonstration review. Its length and scope are limited. The extended subsequent application review will be performed in lieu of a complete C/SCSC demonstration review under circumstances described in paragraph 7-2.c above when--

(1) A contractor or subcontractor is contractually required to apply C/SCSC and is using a management control system which has been previously accepted.

(2) The C/SCSC surveillance monitor in the contract administration office (CAO) confirms that the accepted system has been or is being operated as contractually agreed to in the prior or current contract.

f. **Determination.** When a contractor facility has an accepted system for the proper acquisition phase, a demonstration review will be required only when determined necessary by the service focal point. The DoD component focal point will make the final recommendation to the contracting officer as to whether an extended subsequent application review or a demonstration review will be required of the contractor, considering such relevant factors as--

(1) Assessment of CAO and DCAA surveillance findings.

(2) Current and prior experience of other Government program offices requiring C/SCSC application by the contractor.

g. **Responsibilities.** The DoD component focal point has the authority and responsibility concerning the extended subsequent application review for selection of the review director; approval of type, scope, and extent of the review; and approval of team recommendations. The areas of review to be emphasized must be established by the review director at the outset of the review.

h. **Triservice.** The choice of an extended subsequent application review in lieu of a demonstration review must be coordinated among the services.

7-4. Common Elements of the Subsequent Application Review and the Extended Subsequent Application Review:

a. **Selection and Composition of Team.** Team members for either the subsequent application review or the extended subsequent application review must meet the same standards as demonstration review team members (chapter 4). The members should be experienced and understand the C/SCSC. Knowledge of both the program and the contract is desirable. Formal training, such as that given in AFIT courses 361 and 362 (Surveillance of Cost/Schedule Control Systems Criteria and Cost/Schedule Control Systems Criteria) is a requirement that normally will not be waived. The review director, team chief, and members will be formally assigned to the team. The team composition will normally be as indicated for demonstration review teams (paragraph 4-3a), although the number of team members will normally be fewer. The C/SCSC surveillance monitor in the CAO may be selected as team chief, or as an assistant team chief (paragraph 4-3).

b. **Pre-Award Process:**

(1) A contractor proposing to apply a management control system previously accepted may satisfy the C/SCSC requirements of the solicitation document by citing in the proposal the formal notice of prior acceptance of the management system and/or the memorandum of understanding by which the con-

tractor has agreed to apply the accepted system to all contracts requiring C/SCSC.

(2) Upon receipt of notification in the proposal that the contractor will apply the accepted system to a pending contract, the procuring activity will inform the DoD component focal point (through subordinate command channels) of the contractor's C/SCSC proposal response.

(3) Based upon information available from the contractor's proposal, the CAO and DCAA surveillance findings from other procuring activities, and from other services' C/SCSC experience with the given contractor, a determination will be made as to the nature and extent of the required review. The procuring activity will be responsible for this appraisal and will forward its recommendation to the DoD component focal point. The focal point will review the recommendation, and will notify the procuring activity of its approval or disapproval.

c. Preparation for the Review:

(1) Team Preparation. After contract award and prior to formal review activities with the contractor, the review team chief should ensure that the team members receive briefing on the program, the content and status of the contract, and the findings of the CAO and DCAA C/SCSC surveillance activities. The team members should also review the contractor's management control system description, demonstration review report upon which the current acceptance was based, subsequent application review reports, and recent Cost Performance Reports.

(2) Implementation Visit. When the review director and/or team chief consider it to be necessary, an implementation visit should be made to the contractor's plant to discuss plans and actions associated with the subsequent application review and to ensure that the anticipated scope of the review is understood. Coordination by telephone or correspondence may be used in lieu of an implementation visit whenever practicable.

(3) Contractor Preparation. Prior to the start of the review, it is desirable (but not mandatory) that--

(a) The principal contract tasks have been definitized.

(b) The contractor has developed schedules and a complete set of performance measurement baseline budgets for the definitized work under the contract.

(c) The contractor has completed at least two complete monthly accounting periods of performance against baseline budgets and schedules, and has submitted Cost Performance Reports (CPR) for these two periods.

(d) Each subcontractor required to comply with the C/SCSC or to provide Cost /Schedule Status Reports (C/SSR), has submitted at least one CPR or C/SSR to the prime contractor.

(e) Obvious significant deficiencies in the contractor's management control system operation on the new contract (possibly evident from the quality of the reports, on-site progress reviews, or C/SCSC surveillance) have been identified to the contractor and corrected.

d. Conduct of the Review:

(1) Subsequent Application Review. The contractor is expected to be ready for the subsequent application review 90 days after contract award. This is to assure that the previously accepted management control system is being properly applied on the new contract. The team composition and the duration of the review should be the minimum necessary to complete the task. Usually a three to five day visit to the contractor's facility by a team composed of fewer members than a demonstration review team will suffice. The review is normally conducted by the office which conducts demonstration reviews and includes participation by the Government program management office, the cognizant CAO, and Defense Contract Audit Agency (DCAA) representatives. The review director assigned by the DoD component focal point is expected to provide consistency of C/SCSC interpretation, and maintain the depth of review at a reasonable level.

(2) Extended Subsequent Application Review. The contractor is expected to be ready for the extended subsequent application review within 90 days after contract award to assure that the previously accepted management control system is being applied properly on the current contract(s). The team composition and the duration of the review should be the minimum necessary to accomplish the task. Normally ten workdays should be sufficient for the extended subsequent application review. The review is normally conducted by the office which conducts demonstration reviews and includes participation by the Government program management office, and by the cognizant CAO and Defense Contract Audit Agency (DCAA) representatives. Because of the nature of an *extended* subsequent application review, the nature of the extension of the previously accepted system must be clearly understood. Portions of the management control system designated for review to assure that the extension meets the criteria must be described at the start of the review.

e. Procedure for the Subsequent Application Review and the Extended Subsequent Application Review.

(1) Subsequent Application Review. The basic review routine is similar to that of a C/SCSC demonstration review. However, the direct use of the Evaluation/Demonstration Review Checklist for C/SCSC, appendix E, to the C/SCSC Joint Implementation Guide, is not appropriate unless used on an exception basis and in abbreviated form. The level of detail resulting

from strict application would otherwise be too great and would result in a full reevaluation of the contractor's management control system.

(a) The review will consist of five basic activities. These are--

1. An overview briefing by the contractor to familiarize the review team with the accepted management control system identifying any changes which have occurred since the management system was last subjected to a demonstration review or subsequent application review.

2. A review, on a sample basis, of the documentation which establishes and records changes to the contractor's baseline plan for the contract. This will include work authorizations, schedules, budgets, resource plans, and change records (including management reserve and undistributed budget logs). The purpose is to verify that the contractor has established and is maintaining a valid, comprehensive integrated baseline plan for the contract.

3. A review, on a sample basis, of the reporting of cost and schedule performance against the baseline plan, along with appropriate analyses of problems and projection of future costs. Also, a tracing of the summarization of cost/schedule performance data from the lowest level of formal reporting to the Cost Performance Report. The purpose of this activity is to verify the accuracy of reported information.

4. Interviews with a selected sample of contractor managers to verify that the contractor's previously accepted control systems are fully implemented and are being used in the management of the contract.

5. An exit briefing by the review team covering the team's findings. During this briefing any open system discrepancies should be discussed along with the agreed upon corrective action plan which establishes responsibility and a time-frame for corrective action.

NOTE: In all of the foregoing activities, the sample actually reviewed should be relatively small so as to limit the duration of the review. However, samples should be carefully selected to focus on the areas of greatest cost, activity, and, if possible, risk. If significant problems are found, the sample size and, if necessary, the duration of the review should be extended sufficiently to determine their extent.

(2) **Extended Subsequent Application Review**. The basic review routine is similar to that of a C/SCSC demonstration review. The direct use of the Evaluation/Demonstration Review Checklist for C/SCSC, appendix E, is appropriate here. However, it is not intended to be pursued to the extent that it would result in a full reevaluation of the contractor's management control system.

(a) The review will consist of the following basic activities:

1. An overview briefing by the contractor to familiarize the team with the accepted management control system, identifying any changes which have occurred since the system was last reviewed, especially those changes which provide for the requested extension of the system.

2. A review of the system to establish that it is in fact the accepted system.

3. A review, on a sample basis, of the documentation which establishes and records changes to the contractor's baseline plan for the contract. This will include work authorizations, schedules, budgets, resource plans, and change records (including management reserve and undistributed budget logs). The purpose is to verify that the contractor has established and is maintaining a valid, comprehensive integrated baseline plan for the contract.

4. A review, on a sample basis, of the reporting of cost and schedule performance against the baseline plan, along with the appropriate analyses of problems and projection of future costs. Also a tracing of the summarization of cost performance data from the lowest level of formal reporting to the Cost Performance Report. The purpose of this activity is to verify the accuracy of reported information.

5. Interviews with a selected sample of contractor managers to verify that the contractor's previously accepted control systems are implemented fully and are being used in the management of the contract. The system description manual should also be evaluated both before and during the review to assure that the management control systems being applied to the contract are accurately and completely described within the manual.

6. An exit briefing by the review team covering its draft of findings. During this briefing any open system discrepancies should be discussed along with the agreed upon corrective action plan which establishes responsibility and schedule for corrective action.

NOTE: In all of the foregoing activities, the sample actually reviewed should be sufficient to meet the intent of the review. Samples should be carefully selected to focus on the areas of greatest cost activity, complexity, and if possible, risk. Care should be taken to assure that the criteria are satisfied if the extended subsequent application review is for a phase different from that originally accepted. Identification of significant problems may require a follow-up visit to complete the review.

f. **Review Results.**

(1) Conclusion of the Review. It is expected that the subsequent application review and the extended subsequent application review will result in approval after one review. However, there can be no

approval until all significant discrepancies have been corrected. Significant discrepancies should be brought to the attention of the contractor by the review director or team chief. A schedule to correct deficiencies should be agreed upon during the review. This should include the corrective action plan, persons responsible for correction of deficiencies, and a time-frame for accomplishment.

(2) Uncorrected Discrepancies. Outstanding discrepancies resulting from either a subsequent application review or an extended subsequent application review will be corrected within a reasonable time period (normally 30 days) as specified by the procuring activity performing the review. Failure to do so can result in termination of the memorandum of understanding and withdrawal of prior acceptance of the contractor's system.

(3) Further Review. Where it is necessary to verify that deficiencies have been corrected, the review director should determine whether this can be accomplished by the CAO or whether it will be necessary to reassemble all or part of the review team for a follow-up review. This determination should be based upon an evaluation of the nature of the corrective action required and the contractor's plan and schedule for corrective action. Follow-on reviews must be approved by the DoD component focal point and will be scheduled by the team chief. The contractor's corrective actions prior to the follow-up review will be monitored by the C/SCSC surveillance monitor and reported to the team chief.

(4) Deficiencies in the Previously Accepted System. At the time of either the subsequent application review or the extended subsequent application review, there is a mutual presumption that the contractor's management system is in compliance with the C/SCSC as accepted by DoD. In those instances when the review team determines that the contractor's accepted management system does not meet C/SCSC requirements, the contractor and ACO should be promptly notified. The information provided must detail the specific area of deviation. The procuring activity and the focal point should be notified of major discrepancies and advice should be obtained from all parties regarding items of major disagreement including the lead service involved in acceptance of the system. If during the review the team discovers problems which require changes to the contractor's accepted system, the following procedures should be used:

(a) If the contractor agrees with the problems and proposes an acceptable change to the system, the normal ACO approval procedures for system description changes will apply as provided in both the Joint Implementation and Surveillance Guides.

(b) If the contractor disagrees that there is a problem and does not propose an acceptable change to the system, the procedures outlined in paragraph 1-4 of the Joint Implementation Guide will apply. In those cases where problems cannot be resolved by the team, the discrepancy will be elevated to the focal point. In exceptional cases, particularly when more than one military department is involved, the Performance Measurement Joint Executive Group should be convened to adjudicate outstanding issues.

g. Reports for the Subsequent Application Review and the Extended Subsequent Application Review.

(1) Subsequent Application Review Report. A formal report of the subsequent application review will be prepared by the team chief and forwarded to the DoD component focal point within ten workdays after completion of the review. It should document overall findings, problems, conclusions, and recommendations (see Appendix C for review report format). Specifically, the report should identify the contractor facility and contract reviewed, the dates of the review, and the review team members. It should state the significant findings including any significant discrepancies and any agreements with the contractor regarding their correction. Also, it should specify what further review is required, if any, and recommend responsible activities (CAO, review team, etc.).

(a) Abbreviated reports will be prepared for any follow-up reviews required to assess corrective action. They will be forwarded to the DOD component focal point within seven workdays after completion of the follow-up review.

(b) Upon review and approval of the report and its recommendations, the contractor will be notified through the procuring activity and the CAO, with a copy furnished to the DoD component focal point. The team chief will coordinate plans for the follow-up review with the review director and the contractor.

(2) Extended Subsequent Application Report. A draft report of the extended subsequent application review will be prepared by the team chief prior to departure from the contractor's facility. It should document overall findings, problems, conclusions, and recommendations (see appendix C for required format). Specifically the report should identify the contractor's facility, the source of the previously accepted system, its phase, the contract reviewed, the dates of the review, and the review team members. It should state the significant findings, including any significant discrepancies and any agreements with the contractor regarding their correction. Also, it should specify what further review is required, if any, and recommend the responsible activities (CAO, review team, etc.). After approval of corrective actions, the finalized formal report will be forwarded by the team chief to the appropriate focal point within 20 workdays after completion of corrective actions.

(a) **Minimum Requirements.** The extended subsequent application review report requirements are reduced from those of a demonstration review and are as follows:

1. The same general requirements as for a subsequent application review except that when the accepted system is being applied to a different program phase at the same facility, each of the 35 Cost/Schedule Control Systems Criteria items must be addressed.

2 Any differences between the previously accepted system and the system being reviewed must be addressed at the checklist question level (not just at the criteria level).

3. Exhibits must include as a minimum, Formats 1, 2, 3, 4, 5, 6, 7, and 12 of appendix F, and a schedule trace.

(b) **Review and Approval.** Following approval by the review lead component focal point, the report is forwarded to other Service C/SCSC focal points for concurrence with the team recommendations. Upon review of and concurrence with the report and its recommendations, the procuring activity will be advised of action to be taken.

7-5. Baseline Review:

a. Basis for Application. A baseline review is conducted to determine on a very limited sampling basis that a contractor is continuing to use the previously accepted performance measurement system and is properly implementing a baseline on the contract or option under review. A baseline review is particularly applicable to follow-on contracts, where key C/SCSC knowledgeable contractor personnel are retained from previous efforts. The baseline review is not intended to be a routine replacement for more comprehensive reviews. It should be utilized only where there is a firm basis (e.g., historical evidence) to propose that a more comprehensive review is not warranted. A request coordinated with the cognizant CAO must be processed by the procuring activity to the applicable focal point to conduct such a review. Requests are normally considered when --

(1) The baseline review is to be scheduled within one year of an original performance measurement system acceptance;

(2) The baseline review is to be scheduled within one year of either a successful extended subsequent application review or a subsequent application review;

(3) Otherwise justified by the procuring activity and approved by the applicable focal point.

(4) There are no significant outstanding CAO C/SCSC discrepancies existing at the time of the review.

b. Scope. The review is primarily a data review. The majority of the interface will be with the contractor's cost/schedule performance measurement personnel and key contractor management personnel in the program/project management organization.

c. Conduct of the Baseline Review:

(1) **Review Duration.** The baseline review should be conducted at the contractor's facility and should normally take no longer than three days.

(2) **The Review Team.** The Government team will typically consist of four or more people: A team chief, a program/project office representative, a local CAO representative (normally the C/SCSC surveillance monitor), and a DCAA representative. Additional team members may be utilized at the discretion of the team chief to investigate areas of special interest or concern. A review director may also participate.

d. Preparation for the Baseline Review. Prior to proceeding with a baseline review, the Government team must be familiar with the contractor's cost/schedule performance measurement system description, the applicable C/SCSC demonstration report and any other previous C/SCSC reports. It is also important that the contractor be notified prior to the baseline review of the scope of the review and the required documentation.

e. Baseline Review Methodology. The baseline review is intended to concentrate on selected criteria checklist items of the C/SCSC Joint Implementation Guide. These items are selected to assure that the baseline is in place and current. Among the items which might be selected are: responsibility assignment matrix, the hierarchy of schedules, a schedule trace, management reserve and undistributed budget logs, work authorization documents and flows, cost account/work package documentation, selected performance measurement element traces through internal reports, material acquisition and subcontract reviews, earned value techniques, statusing, estimate at completion calculations, verification of authorized changes to the baseline, and reconciliation of external with internal reports.

f. Results of Baseline Review:

(1) Significant discrepancies should be brought to the attention of the contractor by the team chief. Corrective actions and/or a schedule for correction of deficiencies should be agreed upon during the review.

(2) Uncorrected discrepancies. Outstanding discrepancies resulting from a baseline review will be corrected within a reasonable time period (normally 30 days).

Chapter 8

DATA REQUIREMENTS

8-1. General Information:

a. Specification. The contractor is required to use data from the operative management control systems in making reports to DoD components. The inclusion of the criteria in a solicitation document or contract is not of itself a requirement for delivery of data. Data requirements must be specified in the solicitation and contract in the Contract Data Requirements List (CDRL), DD Form 1423.

(1) DD Form 1660, Management Systems Summary List, identifying appropriate systems from the DoD Acquisition Management Systems and Data Requirements Control List (AMSDL).

(2) The Department of Defense Federal Acquisition Regulations Supplement (DFARS), formerly Defense Acquisition Regulations (DAR).

b. Performance Measurement. Normally the Cost Performance Report (CPR), latest revision of data item DI-F-6000,will be required. Regardless of the reporting formats required, all reported performance measurement information must be derived from the contractor's internal systems. To provide a sound basis for responsible decision making by both contractor management and DoD managers, contractors' management control systems must provide timely data which effectively relate cost, schedule, and technical accomplishment within the framework of the CWBS. As a minimum, a contractor's systems must be capable of providing, at least monthly, such information as--

(1) BCWS, BCWP, and ACWP.

(2) Actual indirect costs and budgeted indirect costs.

(3) Budgeted cost at completion and estimated cost at completion.

(4) Significant variances resulting from the analysis of these data. These variances should be identified in terms of labor rate and efficiency variances, material price and usage variances, and deviations from overhead budgets, together with the reasons for the variances and the impact on the CWBS and organizational elements to which resources have been allocated.

(5) The time-based schedule, significant differences between the planned and actual achievements, and the reasons for the differences.

(6) Appropriate managerial actions taken or proposed as a result of variances and differences reported.

(7) Baseline changes and reasons.

(8) Management reserve changes and reasons.

8-2. Data Elements. A CWBS which has been prepared in accordance with guidance provided in MIL-STD-881 (latest revision), constitutes the basic framework against which the data elements selected are to be reported. Even though reported cost and schedule data may be required only at summary levels, all such data must consist of traceable accumulations which account for work performed and resources expended at appropriate lower levels.

8-3. Cost Performance Report.

a. Specify Data Item. When required by the contracting activity, the Cost Performance Report will be obtained from the contractor by specifying data item DI-F-6000 (latest revision) on DD Form 1423. DI-F-6000 (latest revision) is listed in the DoD 5000.19L, Volume II, Authorized Management Systems and Data Requirements Control List (AMSDL). The AMSDL may be requisitioned from the Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia PA 19120.

b. CWBS and Variance Thresholds. When the DD Form 1423 specifies DI-F-6000, the DD 1423 item should state the WBS items to be reported on and should state the variance thresholds (quantitative or by exception) beyond which cost and schedule variances must be discussed in the problem analysis section (Format 5) of the report.

c. Discontinuance of Cost Performance Reporting When Costs Reach Ceiling. Performance measurement reporting should not be discontinued unless appropriate waivers have been granted and the Government CAO and Program Office no longer need the data.

APPENDIX A

DOD FEDERAL ACQUISITION REGULATIONS SUPPLEMENT

SOLICITATION PROVISION

52.234-7000 Notice of Cost/Schedule Control Systems. As prescribed at 34.005-71,insert the following provision:

NOTICE OF COST/SCHEDULE CONTROL SYSTEMS (AUG 1985)

(a) The Offeror shall submit a comprehensive plan for compliance with the attached criteria (DoDI 7000.2 Performance Measurement for Selected Acquisitions) for the internal Cost/Schedule Control Systems which are or will be operational for any contract resulting from this solicitation, and which includes the C/SCSC clause set forth at 52.234-7001 of the DoD FAR Supplement. The Offeror shall identify the Offeror's existing management systems separately from proposed modifications to meet the criteria. The plan shall:

(i) describe the management systems and their application in all major functional cost areas such as engineering, manufacturing and tooling, as related to development of the work breakdown structure, planning, budgeting, scheduling, work authorization, cost accumulation, measurement and reporting of cost and schedule performance, variance analysis, and baseline control;

(ii) describe compliance with each of the criteria, preferably by cross-referencing appropriate elements in the description of systems with the items in the checklist for C/SCSC contained in AFSC/AFCC/AFLC-P173-5, AMC-P 715-5, NAVSO-P3627, DLAH 8400.2, DCAA-P7641.47, Cost/Schedule Control Systems Criteria Joint Implementation Guide .

(iii) Identify the major subcontractors, or major subcontracted effort in the event major subcontractors have not been selected, planned for application of the criteria;

(iv) describe the proposed procedure for administration of the criteria as applied to subcontractors.

(b) If the contractor is utilizing Cost/Schedule Control Systems which have been previously accepted, or is operating such systems under a current Memorandum of Understanding, evidence of such may be submitted in lieu of the comprehensive plan mentioned above. In such event, the Contracting Officer will determine the extent to which such systems shall be reviewed to assure continued compliance with the criteria .

(c) The Offeror shall provide information and assistance as requested by the Contracting Officer for evaluation of compliance with the cited criteria.

(d) The Offeror's plan for Cost/Schedule Control Systems will be evaluated prior to contract award. Upon acceptance of the Cost/Schedule Control Systems a description of the accepted systems will be referenced in the contract.

(e) Subcontractor selection for application of the C/SCSC will be by agreement between the prime contractor and the Government. The prime contractor will contractually require the selected subcontractors to comply with the criteria. However, demonstrations and reviews of these selected subcontractors' management systems may be performed by the procuring authority when requested by either the prime or subcontractor.

(End of provision)

APPENDIX B

DOD FEDERAL ACQUISITION REGULATIONS SUPPLEMENT

CONTRACT CLAUSE

52.234-7001 Cost/Schedule Control Systems. As prescribed at 34.005-71 insert the following clause:

COST/SCHEDULE CONTROL SYSTEMS (AUG 1985)

(a) The Contractor shall establish, maintain and use in the performance of this contract Cost/Schedule Control Systems meeting the attached criteria (DoDI 7000.2 Performance Measurement for Selected Acquisitions). Prior to acceptance by the Contracting Officer and within ninety (90) (or as otherwise agreed to by the parties) calendar days after contract award, the Contractor shall be prepared to demonstrate the operation of the Contractor's systems to the Government to verify that the proposed systems meet the established criteria set forth above. As a part of the demonstration review and acceptance procedure, the Contractor shall furnish the Government a description of the Cost/Schedule Control Systems applicable to this contract in such form and detail as indicated by the AFSC/AFCC AFLC-P173-5 AMC-P 175-5 NAVSO-P3627 DLAH 8400.2 DCAA-P7641.47, Cost/Schedule Control Systems Criteria Joint Implementation Guide hereinafter referred to as the guide, or required by the Contracting Officer. The Contractor agrees to provide access to all pertinent records, data and plans as requested by representatives of the Government for the conduct of the review.

(b) The description of the management systems accepted by the Contracting Officer, identified by title and date, shall be referenced in the contract. Such systems shall be maintained and used by the Contractor in the performance of the contract.

(c) Contractor changes to the accepted systems shall be submitted to the Contracting Officer for review and approval. The Contracting Officer shall advise the Contractor of the acceptability of such changes within sixty (60) days after receipt from the Contractor. When systems existing at time of contract award do not comply with the criteria, adjustments necessary to assure compliance will be effected at no change in contract price or fee .

(d) The Contractor agrees to provide access to all pertinent records and data requested by the Contracting Officer or duly authorized representative for the purpose of permitting Government surveillance to ensure continuing application of the accepted systems to this contract. Deviations from accepted systems discovered during contract performance shall be corrected as directed by the Contracting Officer.

(e) The Contractor shall require that each selected subcontractor, as mutually agreed to between the Government and the Contractor and as set forth in the schedule of this contract, shall meet the Cost/Schedule Control Systems criteria as set forth in the guide and shall incorporate in all such subcontracts adequate provisions for demonstration, review, acceptance and surveillance of subcontractors' systems, to be carried out by the Government when requested by either the prime or subcontractor.

(f) If the Contractor or subcontractor is utilizing Cost/Schedule Control Systems which have been previously accepted or is operating such systems under a current Memorandum of Understanding, the Contracting Officer may waive all or part of the provisions hereof concerning demonstration and review.

(End of Clause)

APPENDIX C

C/SCSC REVIEW REPORTS

DEMONSTRATION REVIEW REPORT. Primary consideration must be given to the fact that reports (particularly the findings) must provide a basis for effective review by others with limited or no knowledge of the specific management system. The quality of the report is usually taken as a direct reflection of the nature and quality of the review and as such is the vehicle for obtaining acceptance from other DoD components. The following is a format for a typical C/SCSC demonstration review report:.

1. **Table of Contents.**

2. **Index to Exhibits.**

3. **General.** Introductory comment:

a. **Background.** Briefly describe the events relating to the contractor's implementation of C/SCSC and the Government's reviews relating thereto. Identify the contract purpose, type, duration, amounts (total, ceiling price, target cost, etc.), the program being supported, and the cognizant DoD component. Also indicate other work in the contractor's facility that has the contractual requirement for compliance with C/SCSC.

b. **Contractual Requirement.** Identify the specific contract requirement for the C/SCSC.

4. **Purpose.** Identify the purpose of the review. Normally, it will be for the demonstration review (or redemonstration review(s) if applicable) of the performance measurement system operated in a specific contract effort.

5. **Scope.** This section should identify the specific contractual entity which is the subject of this review; for example, division, company, plant, and the functional organizations such as engineering, manufacturing, quality assurance, etc., included in the review. Also, discuss whether the review is related to development or production contracts and if the system is restricted to the specific contract or is used throughout the facility.

6. **Review Process.** Describe the extent of the review, indicate the approach taken. Areas not investigated should be discussed and reasons provided; for example, when review of the method of implementing contract changes could not be done because no contract changes had been executed. Identify the methodology used in conducting the review indicating such items as range of interviews, depth of review, documentation examined, and traces accomplished. Team members and their associated responsibilities should be identified in this section.

7. **Findings.** Organize this section according to the major categories of the criteria; for example, organization, planning and budgeting, accounting, analysis, and revisions. Address each of the five basic areas reviewed in narrative of sufficient depth to explain system compliance. State each criterion, describe how the management system complies with that criterion, and support responses by exhibits to illustrate and prove the compliance.

a. State each checklist question, and reference the contractor's system description paragraph numbers. Findings must explain how the system satisfies or does not satisfy the checklist question by going into sufficient depth to clearly establish compliance or noncompliance.

b. The narrative may be supported by or relate to exhibits. However, the narrative must explain the exhibit so that it would not be necessary for the reviewer to turn to the exhibit to understand why it is there and what it portrays. The narrative should be able to stand by itself, but exhibits cannot stand alone. The narrative in the Findings section should state explicitly what the reader should look for on each exhibit and how the exhibit proves that the requirement is met.

8. **Conclusions.** This section should include the overall evaluation of the systems reviewed as to their compliance with the criteria. Reference should be made, when applicable, to the supporting evidence in the Findings section. This portion of the report must contain a conclusion concerning the acceptability of the contractor's system as to its compliance with the C/SCSC. The acceptance statement should specifically identify the system demonstrated and whether it is used for development, production, or construction .

9. **Recommendations.** This section should recommend necessary corrective actions to achieve acceptability or compliance. The recommendations should not delineate specific corrective methods to correct deficiencies but should identify areas requiring improvement. Suggested improvements to enhance the system can be noted here but should be identified separately from corrective actions necessary to comply with the criteria. If applicable, include a recommendation of the necessity for a redemonstration review.

10. **Redemonstration Reviews.** When it is necesssary to conduct redemonstration reviews because of deficiencies found and not corrected during the demonstration review, the following guidance applies:

a. The deficiencies existing at the conclusion of the demonstration review are to be cited in the findings associated with the specific criteria items. These

deficiencies then become the basis for the redemonstration review and are addressed in this section of the report. The report will have separate sections to address the findings of each redemonstration review.

b. The redemonstration review section will be presented in the same format as the demonstration review section. Only those events applicable to the redemonstration will be addressed. However, do not restate the deficiency in the Findings section unless necessary for understanding the new findings.

11. Exhibits:

a. The exhibits will include as a minimum those exhibits, formats, and procedures called for in the Evaluation/Demonstration Review Checklist for C/SCSC. Exhibit 1 will be a reproduced checklist marked to show, for each question, the compliance or noncompliance of the management system. The criterion block will be left blank and all N/As will be placed in the "No" column. ("No" answers should be explained in the Findings.)

b. The remarks column of the checklist may be used to show the page and paragraph in the contractor's system description where the question is discussed.

c. In preparing exhibits it is important that--

(1) Exhibits be completely legible. Do not reduce them merely to avoid foldouts. Foldouts are entirely acceptable when they provide clearer, more legible exhibits.

(2) Exhibits be annotated and marked to highlight the specific element(s) of information and to identify the trail in support of the related narrative.

(3) Exhibits be placed at the end of the report and numbered consecutively without regard to the category of criteria to which they relate.

(4) Exhibit numbers be placed in the lower outside corner.

(5) Exhibits be from the same time frame and, where feasible, from the same leg of the WBS. The Government team shall not redraw the CWBS or any of the exhibits in order to eliminate intermediate summarizations (e.g., geographical, functional, etc.).

(6) Exhibits supporting the Analysis section of the Findings be provided for both direct and indirect cost variances. Indirect cost variances must be analyzed from the standpoint of the manager responsible for their control; that is, the point at which they were incurred.

NOTE: The following precautions should be observed in report preparation to produce concise and meaningful reports :

a. An executive summary is not required. (It is optional).

b. The narrative content must adequately explain how the system complies with the related criteria. There is a strong tendency to refer to contractor documents without an adequate description of the nature and function of the document. However, do not quote at length from the system description, but instead, synopsize the portion of the system description involved.

c. Elements elected for trace should be stated in the narrative. Selected trace elements should be consistently used in reporting on the various categories of the criteria.

d. Exhibits must be legible and complete. In many cases, handwritten exhibits cannot be deciphered. Required reconciliations, such as reconciliation of internal to external reports, are frequently omitted.

e. Exhibits must identify the specific areas to which attention is directed; that is, they must be marked to highlight the items of interest, or an explanatory note superimposed to make clear exactly what the exhibit illustrates.

f. Exhibits must portray "live data," except when used to reproduce a part of directives, procedures, or forms.

g. include only the pertinent pages (appropriate excerpts) of multipage exhibits (such as WBS Dictionary, CPRs, Schedules, etc.).

h. After stating each checklist question, do not repeat it in a positive statement. It is enough to say "Yes" or "No" or "Yes. Not demonstrated," and follow with appropriate remarks.

i. For each checklist question:

(1) State what the system description requires.

(2) Refer to the applicable procedures or subsection of the system description documentation.

(3) Describe briefly what the team did for verification using the exhibit section as applicable.

j. Each checklist answer does not have to have an exhibit.

k. "Yes. Not demonstrated" checklist items should also be highlighted in the recommendation/conclusion area.

l. "N/A" will only be used when the system does not provide compliance and never will have to comply (e.g., provide higher level CWBS budgets above the cost account level).

m. Answers to checklist questions may be combined or cross referenced rather than repeating narrative discussions found elsewhere.

EXTENDED SUBSEQUENT APPLICATION REVIEW REPORT. The requirements of this report are reduced from those of a demonstration review. A draft report of the review will be prepared by the team chief prior to departure from the contractor's facility. After approval of corrective actions the finalized formal report will be forwarded by the team chief to the appropriate focal point within 20 working days after completion of corrective actions. The minimum requirements for reports of the extended subsequent application review are as follows:

1. **Table of Contents**

2. **Index to Exhibits**

3. **General.** Introductory comment:

a. **Background** Discuss why the extended subsequent application review was selected as the appropriate type C/SCSC review (see Chapter 5-3.d). Briefly describe the events relating to the contractor's prior system acceptance and any subsequent reviews. Identify the contract purpose, type, duration, amounts (total, ceiling price, target cost, etc.), the program being supported, and the cognizant DoD component. Also list other work in the contractor's facility to which application of the C/SCSC is a contractual requirement.

b. **Contractual Requirement.** Identify the specific contract requirement for the C/SCSC.

4. **Purpose.** Identify the purpose by describing how the system demonstrated during this review extends the applicability of the previously accepted system.

5. **Scope.** Identify the specific contractual entity which is the subject of this review; for example, division, company, plant, and the functional organizations such as engineering, manufacturing, quality assurance, etc., included in the review. Discuss whether the review is related to development or production contracts and if the system is restricted to the specific contract or is used throughout the facility.

6. **Review Process.** Describe the extent of the review, such as whether or not the entire system was demonstrated, or merely parts applicable to the extension of the system. Areas not investigated should be discussed and reasons provided. Indicate the approach taken; that is, "criteria category," "functional," or other. Identify the methodology used in conducting the review, indicating such items as range of interviews, depth of review, documents examined, and traces conducted. Team members and their associated responsibilities should be identified in this section.

7. **Findings.** Organize this section according to the major categories of the criteria; for example, organization, planning and budgeting, accounting, analysis, and revisions. Address each of these in narrative of sufficient depth to explain C/SCSC compliance of the contractor's system.

a. Each of the 35 criteria should be addressed, with a description of how the management system complies with each criterion. Support responses with appropriate exhibits to illustrate and prove criteria compliance.

b. Any differences between the previously accepted system and the system being reviewed must be addressed at the checklist question level (not just at the criteria level).

8. **Exhibits.** Exhibits must include, as a minimum, Formats 1, 2, 3, 4, 5, 6, 7, and 12 of the Joint Implementation Guide appendix F , and a schedule trace. Exhibits must be explained within the narrative by telling why the exhibit has been entered and what it illustrates or proves.

9. **Conclusions.** This section should include the overall evaluation of the systems reviewed as to their compliance with the criteria. Reference should be made, when applicable, to the supporting evidence in the Findings section. This portion of the report must contain a conclusion concerning the acceptability of the contractor's system as to its compliance with the C/SCSC, and the acceptability of extending the contractor's previously accepted management control system as proposed. The acceptance statement should specifically identify the system demonstrated and whether it is used for development or production.

10. **Recommendations.** This section should recommend necessary corrective actions to achieve acceptability or compliance. The recommendations should not delineate specific corrective methods to correct deficiencies but should identify areas requiring improvement. Suggested improvements to enhance the system may be noted here but should be identified separately from corrective actions necessary to comply with the criteria. If applicable, include a recommendation for further review.

SUBSEQUENT APPLICATION REVIEW REPORT. This report should be prepared by the team chief and forwarded to the DoD component focal point within 10 working days after completion of the review. Abbreviated reports will be prepared for any follow-up reviews required to assess corrective action. They will be forwarded to the DoD component focal point within 7 working days after completion of the follow-up review. The report will be prepared according to the following outline:

1. **Introduction:**
   a. Summarize type and scope of contract.
   b. Give basis of acceptance of contractor's system as C/SCSC compliant.
   c. Identify any other in-plant contracts requiring C/SCSC compliance.
   d. Identify team members and their organizations.

2. **Scope of Review.** Identify contractor organizations and data samples reviewed.

3. **Findings.**
   a. Organize findings in paragraph form under each of the major criteria groups; that is, organization, planning and budgeting, accounting, analysis, and revisions.
   b. Each criterion need not be addressed. Determine data samples and manager interviews by the critical aspects of the contractual statements of work. As a minimum, the findings should address:
      (1) WBS subdivision and integration with the contractor's organizational structure.
      (2) Schedule subdivision and integration with cost account/work package schedules.
      (3) Work package identification.
      (4) Baseline establishment and maintenance.
      (5) BCWP determination.
      (6) Identification of management reserves and undistributed budgets.
      (7) Establishment of internal budgets which add up to the contract budget base.
      (8) Material measurement.
      (9) Estimated cost at completion determination and reasonableness.
      (10) Identification of variance analysis thresholds and quality of analysis.
      (11) Contractor manager knowledge and use the system.
      (12) Contractual change incorporation.

4. **Conclusions and Recommendations.**
   a. The contractor has (or has not) properly implemented the system.
   b. Deficiencies found and corrective action taken.
   c. Remaining deficiencies with assigned responsibility and schedule for accomplishment of corrective action.
   d. Recommendation for a second review if necessary.
   e. Recommended items for CAO surveillance.

BASELINE REVIEW REPORT. A draft report of the baseline review will be prepared by the team chief prior to departure from the contractor's facility. After approval of corrective actions the finalized report will be forwarded by the team chief to the appropriate service focal point within 10 workdays. If a follow-up review is required to assess corrective action, an abbreviated report will be prepared and forwarded to the DoD component focal point within 7 workdays after completion of the follow-up review. Specifically the baseline review report should do the following:

a. Identify the contractor's facility, the program phase, the contract reviewed, dates of the review, contract performance measurement status, and review team members.

b. State significant findings, including any significant discrepancies and any agreements with the contractor regarding their correction.

c. Specify whether or not further review is required, and recommend the responsible activities (CAO, DCAA, or review team).

APPENDIX D

EXAMPLE OF MEMORANDUM OF UNDERSTANDING FOR C/SCSC

This Memorandum of Understanding entered into as of _____ establishes a mutual agreement between the Department(s) of the (Army-Navy-Air Force, as appropriate) and (insert contractor's full name, including facility and location) regarding the implementation and maintenance of management control systems conforming to the criteria established by Department of Defense Instruction 7000.2, Performance Measurement for Selected Acquisitions, and as implemented by AFSC/AFCC/AFLC-P173-5, AMC-P 715-5, NAVSO-P3627, DLAH 8400.2, DCAA-P7641.47.

WHEREAS, the contractor has demonstrated certain management control systems and subsystems as identified and defined in (contractor's system description dated _____), and

WHEREAS, the Department(s) of the (Army-Navy-Air Force, as appropriate), by letter dated _____), based on demonstration review report dated _____, did validate such systems and subsystems then.

BE IT UNDERSTOOD AND AGREED that such systems and subsystems which have been validated as indicated above, together with approved changes thereto, shall apply to future (specify type of contract; for example, RDT&E, production, or both) contracts entered into between the contractor and the Department(s) of the (Army-Navy-Air Force, as appropriate) which require compliance with the C/SCSC; and

BE IT FURTHER UNDERSTOOD AND AGREED THAT:

(1) Contractor-proposed changes to those validated systems and subsystems will be submitted to the cognizant CAO for review and approval or disapproval by the ACO.

(2) The contractor agrees to provide access to pertinent records and data in order to permit adequate surveillance of the validated systems and subsystems.

This Memorandum of Understanding will remain in force indefinitely, subject to modification by mutual agreement or termination by either party.

_____ _____

(Administrative Contracting Officer) (Contractor)

APPENDIX E

EVALUATION/DEMONSTRATION REVIEW CHECKLIST FOR C/SCSC			
CHECKLIST ITEMS	YES	NO	REMARKS
I. ORGANIZATION			
1. DEFINE ALL THE AUTHORIZED WORK AND RELATED RESOURCES TO MEET THE REQUIREMENTS OF THE CONTRACT, USING THE FRAMEWORK OF THE CWBS.			
a. Is only one CWBS used for the contract (attach copy of CWBS)?			
b. Is all contract work included in the CWBS?			
c. Are the following items included in the CWBS (annotate copy of CWBS to show elements below):			
(1) Contract line items and end items (if in consonance with MIL-STD-881 latest edition)?			
(2) All CWBS elements specified for external reporting?			
(3) CWBS elements to be subcontracted, with identification of subcontractors?			
(4) Cost account levels?			
2. IDENTIFY THE INTERNAL ORGANIZATIONAL ELEMENTS AND THE MAJOR SUBCONTRACTORS RESPONSIBLE FOR ACCOMPLISHING THE AUTHORIZED WORK.			
a. Are all authorized tasks assigned to identified organizational elements? (This must occur at the cost account level as a minimum. Prepare exhibit showing relationships.)			
b. Is subcontracted work defined and identified to the appropriate subcontractor within the proper WBS element? (Provide representative example.)			
3. PROVIDE FOR THE INTEGRATION OF THE CONTRACTOR'S PLANNING, SCHEDULING, BUDGETING, WORK AUTHORIZATION, AND COST ACCUMULATION SYSTEMS WITH EACH OTHER, THE CWBS, AND THE ORGANIZATIONAL STRUCTURE. (Reference format 1.)			
a. Are the contractor's management control systems listed above integrated with each other, the CWBS, and the organizational structure at the following levels: (Use matrix to illustrate the relations.)			
(1) Total contract?			
(2) Cost account?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
4. IDENTIFY THE MANAGERIAL POSITIONS RESPONSIBLE FOR CONTROLLING OVERHEAD (INDIRECT COSTS)			
a. Are the following organizational elements and managers clearly identified:			
(1) Those responsible for the establishment of budgets and assignment of resources for overhead performance?			
(2) Those responsible for overhead performance control of related costs?			
b. Are the responsibilities and authorities of each of the above organizational elements or managers clearly defined?			
5. PROVIDE FOR INTEGRATION OF THE CWBS WITH THE CONTRACTOR'S FUNCTIONAL ORGANIZATIONAL STRUCTURE IN A MANNER THAT PERMITS COST AND SCHEDULE PERFORMANCE MEASUREMENT FOR CWBS AND ORGANIZATIONAL ELEMENTS. (Provide matrix showing integration.)			
a. Is each cost account assigned to a single organizational element directly responsible for the work and identifiable to a single element of the CWBS?			
b. Are the following elements for measuring performance available at the levels selected for control and analysis:			
(1) Budgeted cost for work scheduled?			
(2) Budgeted cost for work performed?			
(3) Actual cost of work performed?			
II. PLANNING AND BUDGETING			
1. SCHEDULE THE AUTHORIZED WORK IN A MANNER WHICH DESCRIBES THE SEQUENCE OF WORK AND IDENTIFIES THE SIGNIFICANT TASK INTERDEPENDENCIES REQUIRED TO MEET THE DEVELOPMENT, PRODUCTION, AND DELIVERY REQUIREMENTS OF THE CONTRACT.			
a. Does the scheduling system contain (Prepare exhibit showing traceability from contract task level to work package schedules.)--			
(1) A master program schedule?			
(2) Intermediate schedules, as required, which provide a logical sequence from the master schedule to the cost account level?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
(3) Detailed schedules which support cost account and work package start and completion dates/events?			
b. Are significant decision points, constraints, and interfaces identified as key milestones?			
c. Does the scheduling system provide for the identification of work progress against technical and other milestones, and also provide for forecasts of completion dates of scheduled work?			
d. Are work packages formally scheduled in terms of physical accomplishment by month, week, or day as appropriate?			
2. IDENTIFY PHYSICAL PRODUCTS, MILESTONES, TECHNICAL PERFORMANCE GOALS, OR OTHER INDICATORS THAT WILL BE USED TO MEASURE OUTPUT.			
a. Are meaningful indicators identified for use in measuring the status of cost and schedule performance? (Provide representative samples.)			
b. Does the contractor's system identify work accomplishment against the schedule plan? (Provide representative examples.)			
c. Are current work performance indicators and goals relatable to original goals as modified by contractual changes, replanning, and reprogramming actions? (Provide exhibit showing incorporation of changes to original indicators and goals.)			
3. ESTABLISH AND MAINTAIN A TIME-PHASED BUDGET BASELINE AT THE COST ACCOUNT LEVEL AGAINST WHICH CONTRACT PERFORMANCE CAN BE MEASURED. INITIAL BUDGETS ESTABLISHED FOR THIS PURPOSE WILL BE BASED ON THE NEGOTIATED TARGET COST. ANY OTHER AMOUNT USED FOR PERFORMANCE MEASUREMENT PURPOSES MUST BE FORMALLY RECOGNIZED BY BOTH THE CONTRACTOR AND THE GOVERNMENT. (Reference formats 2 and 8.)			
a. Does the performance measurement baseline consist of the following:			
(1) Time-phased cost account budgets?			
(2) Higher level CWBS element budgets (where budgets are not yet broken down into cost account budgets)?			
(3) Undistributed budgets, if any?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
(4) Indirect budgets, if not included in the above?			
b. Is the entire contract planned in time-phased cost accounts to the extent practicable?			
c. In the event that future contract effort cannot be defined in sufficient detail to allow the establishment of cost accounts, is the remaining budget assigned to the lowest practicable CWBS level elements for subsequent distribution to cost accounts?			
d. Does the contractor require sufficient detailed planning of cost accounts to constrain the application of budget initially allocated for future effort to current effort? (Explain constraints.)			
e. Are cost accounts opened and closed based on the start and completion of work contained therein?			
4. ESTABLISH BUDGETS FOR ALL AUTHORIZED WORK WITH SEPARATE IDENTIFICATION OF COST ELEMENTS (LABOR, MATERIAL, ETC.). (Reference formats 2, 3, and 4.)			
a. Does the budgeting system contain-- (Provide exhibit.)			
(1) The total budget for the contract (including estimates for authorized but unpriced work)?			
(2) Budgets assigned to major functional organizations? (See checklist Item II, 9ab.)			
(3) Budgets assigned to cost accounts?			
b. Are the budgets assigned to cost accounts planned and identified in terms of the following cost elements: (Reference Formats 3 and 4.)			
(1) Direct labor dollars and/or hours?			
(2) Material and/or subcontract dollars?			
(3) Other direct dollars?			
c. Does the work authorization system contain-- (Prepare sample exhibit.)			
(1) Authorization to proceed with all authorized work?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
(2) Appropriate work authorization documents which subdivide the contractual effort and responsibilities within functional organizations?			
5. TO THE EXTENT THE AUTHORIZED WORK CAN BE IDENTIFIED IN DISCRETE, SHORT-SPAN WORK PACKAGES, ESTABLISH BUDGETS FOR THIS WORK IN TERMS OF DOLLARS, HOURS, OR OTHER MEASURABLE UNITS. WHERE THE ENTIRE COST ACCOUNT CANNOT BE SUBDIVIDED INTO DETAILED WORK PACKAGES, IDENTIFY THE FAR TERM EFFORT IN LARGER PLANNING PACKAGES FOR BUDGETING AND SCHEDULING PURPOSES: (Reference format 6.)			
a. Do work packages reflect the actual way in which the work will be done and are they meaningful products or management-oriented subdivisions of a higher level element of work? (Provide representative sample.)			
b. Are detailed work packages planned as far in advance as practicable?			
c. Is work progressively subdivided into detailed work packages as requirements are defined?			
d. Is future work which cannot be planned in detail subdivided to the extent practicable for budgeting and scheduling purposes? (Provide sample.)			
e. Are work packages reasonably short in time duration or do they have adequate objective indicators/milestones to minimize subjectivity of the in-process work evaluation?			
f. Do work packages consist of discrete tasks which are adequately described? (Provide representative sample.)			
g. Can the contractor substantiate work package and planning package budgets?			
h. Are budgets or values assigned to work packages and planning packages in terms of dollars, hours, or other measurable units?			
i. Are work packages assigned to performing organizations?			
6. PROVIDE THAT THE SUM OF ALL WORK PACKAGE BUDGETS PLUS PLANNING PACKAGES WITHIN A COST ACCOUNT EQUALS THE COST ACCOUNT BUDGET. (Reference format 2.)			
a. Does the sum of all work package budgets plus planning packages within cost accounts equal the budgets assigned to those cost accounts?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
7. IDENTIFY RELATIONSHIPS OF BUDGETS OR STANDARDS IN UNDERLYING WORK AUTHORIZATION SYSTEMS TO BUDGETS FOR WORK PACKAGES.			
a. Where engineering standards or other internal work measurement systems are used, is there a formal relationship between these values and work package budgets? (Provide samples showing relationships.)			
b. Where "learning" is used in developing underlying budgets is there a direct relationship between anticipated learning and time-phased budgets?			
8. IDENTIFY AND CONTROL LEVEL OF EFFORT ACTIVITY BY TIME-PHASED BUDGETS ESTABLISHED FOR THIS PURPOSE. ONLY THAT EFFORT WHICH CANNOT BE IDENTIFIED AS MEASURED EFFORT OR AS APPORTIONED EFFORT WILL BE CLASSED AS LOE. (Reference format 6.)			
a. Are time-phased budgets established for planning and control of level of effort activity by category of resource; for example, type of manpower and/or material? (Explain method of control and analysis.)			
b. Is work properly classified as measured effort, LOE, or apportioned effort and appropriately separated?			
9. ESTABLISH OVERHEAD BUDGETS FOR THE TOTAL COSTS OF EACH SIGNIFICANT ORGANIZATIONAL COMPONENT WHOSE EXPENSES WILL BECOME INDIRECT COSTS. REFLECT IN THE CONTRACT BUDGETS AT THE APPROPRIATE LEVEL, THE AMOUNTS IN OVERHEAD POOLS THAT WILL BE ALLOCATED TO THE CONTRACT AS INDIRECT COSTS. (Reference DCAA Audit Manual and FAR 31.203 (Reference format 7.))			
a. Are overhead cost budgets (or projections) established on a facility-wide basis at least annually for the life of the contract?			
b. Are overhead cost budgets established for each organization which has authority to incur overhead costs?			
c. Are all elements of indirect expense identified to overhead cost budgets of projections?			
d. Are overhead budgets and costs being handled according to the disclosure statement when applicable, or otherwise properly classified (for example, engineering overhead, IR&D)?			
e. Is the anticipated (firm and potential) business base projected in a rational, consistent manner? (Explain.)			
f. Are overhead costs budgets established on a basis consistent with anticipated direct business base?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
g. Are the requirements for all items of overhead established by rational, traceable processes?			
h. Are the overhead pools formally and adequately identified? (Provide a list of the pools.)			
i. Are the organizations and items of cost assigned to each pool identified?			
j. Are projected overhead costs in each pool and the associated direct costs used as the basis for establishing interim rates for allocating overhead to contracts?			
k. Are projected overhead rates applied to the contract beyond the current year based on-			
(1) Contractor financial periods; for example, annual?			
(2) The projected business base for each period?			
(3) Contemplated overhead expenditure for each period based on the best information currently available?			
l. Are overhead projections adjusted in a timely manner to reflect-			
(1) Changes in the current direct and projected base?			
(2) Changes in the nature of the overhead requirements?			
(3) Changes in the overhead pool and/or organization structures?			
m. Are the WBS and organizational levels for application of the projected overhead costs identified?			
10. IDENTIFY MANAGEMENT RESERVES AND UNDISTRIBUTED BUDGET.			
a. Is all budget available as management reserve identified and excluded from the performance measurement baseline?			
b. Are records maintained to show how management reserves are used? (Provide exhibit.)			
c. Is undistributed budget limited to contract effort which cannot yet be planned to CWBS elements at or below the level specified for reporting to the Government?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
d. Are records maintained to show how undistributed budgets are controlled? (Provide exhibit.)			
11. PROVIDE THAT THE CONTRACT TARGET COST PLUS THE ESTIMATED COST OF AUTHORIZED BUT UNPRICED WORK IS RECONCILED WITH THE SUM OF ALL INTERNAL CONTRACT BUDGETS AND MANAGEMENT RESERVES. (Reference formats 3, 4, and 5.)			
a. Does the contractor's system description or procedures require that the performance measurement baseline plus management reserve equal the contract budget base?			
b. Do the sum of the cost account budgets for higher level CWBS elements, undistributed budget, and management reserves reconcile with the contract target cost plus the estimated cost for authorized unpriced work? (Provide exhibit.)			
III. ACCOUNTING			
1. RECORD DIRECT COSTS ON AN APPLIED OR OTHER ACCEPTABLE BASIS CONSISTENT WITH THE BUDGETS IN A FORMAL SYSTEM THAT IS CONTROLLED BY THE GENERAL BOOKS OF ACCOUNT.			
a. Does the accounting system provide a basis for auditing records of direct costs chargeable to the contract?			
b. Are elements of direct cost (labor, material, and so forth) accumulated within cost accounts in a manner consistent with budgets using recognized acceptable costing techniques and controlled by the general books of account?			
2. SUMMARIZE DIRECT COSTS FROM THE COST ACCOUNTS INTO THE WBS WITHOUT ALLOCATION OF A SINGLE COST ACCOUNT TO TWO OR MORE WBS ELEMENTS. (Reference format 3.)			
a. Is it possible to summarize direct costs from the cost account level through the CWBS to the total contract level without allocation of a lower level CWBS element to two or more higher level CWBS elements? (This does not preclude the allocation of costs from a cost account containing common items to appropriate using cost accounts)			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
3. SUMMARIZE DIRECT COSTS FROM THE COST ACCOUNTS INTO THE CONTRACTOR'S FUNCTIONAL ORGANIZATIONAL ELEMENTS WITHOUT ALLOCATION OF A SINGLE COST ACCOUNT TO TWO OR MORE ORGANIZATIONAL ELEMENTS. (Reference format 4.)			
a. Is it possible to summarize direct costs from the cost account level to the highest functional organizational level without allocation of a lower level organization's cost to two or more higher level organizations? (This does not preclude the allocation of costs from a cost account containing minor non-organizational work to the appropriate functional organizations.)			
4. RECORD ALL INDIRECT COSTS WHICH WILL BE ALLOCATED TO THE CONTRACT.			
a. Does the cost accumulation system provide for summarization of indirect costs from the point of allocation to the contract total?			
b. Are indirect costs accumulated for comparison with the corresponding budgets?			
c. Do the lines of authority for incurring indirect costs correspond to the lines of responsibility for management control of the same components of costs? (Explain controls for fixed and variable indirect costs.)			
d. Are indirect costs charged to the appropriate indirect pools and incurring organization?			
e. Are the bases and rates for allocating costs from each indirect pool consistently applied?			
f. Are the bases and rates for allocating costs from each indirect pool to commercial work consistent with those used to allocate such costs to Government contracts?			
g. Are the rates for allocating costs from each indirect cost pool to contracts updated as necessary to ensure a realistic monthly allocation of indirect costs wihout significant year-end adjustments?			
h. Are the procedures for identifying indirect costs to incurring organizations, indirect cost pools, and allocating the costs from the pools to the contracts formally documented?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
5. IDENTIFY THE BASIS FOR ALLOCATING THE COST OF APPORTIONED EFFORT.			
a. Is effort which is planned and controlled in direct relationship to cost accounts or work packages identified as apportioned effort?			
b. Are methods used for applying apportioned effort costs to cost accounts applied consistently and documented in an established procedure?			
6. IDENTIFY UNIT COSTS, EQUIVALENT UNIT COSTS, OR LOT COSTS AS APPLICABLE.			
a. Does the contractor's system provide unit costs, equivalent unit or lot costs in terms of labor, material, other direct, and indirect costs? (Describe procedure.)			
b. Does the contractor have procedures which permit identification of recurring or nonrecurring costs as necessary?			
7. THE CONTRACTOR'S MATERIAL ACCOUNTING SYSTEM WILL PROVIDE FOR: ACCURATE COST ACCUMULATION AND ASSIGNMENT OF COSTS TO COST ACCOUNTS IN A MANNER CONSISTENT WITH THE BUDGETS USING RECOGNIZED, ACCEPTABLE COSTING TECHNIQUES; DETERMINATION OF PRICE VARIANCES BY COMPARING PLANNED VERSUS ACTUAL COMMITMENTS; COST PERFORMANCE MEASUREMENT AT POINT IN TIME MOST SUITABLE FOR THE CATEGORY OF MATERIAL INVOLVED, BUT NO EARLIER THAN THE TIME OF ACTUAL RECEIPT OF MATERIAL; DETERMINATION OF COST VARIANCES ATTRIBUTABLE TO THE EXCESS USAGE OF MATERIAL; DETERMINATION OF UNIT OR LOT COSTS WHEN APPLICABLE; AND FULL ACCOUNTABILITY FOR ALL MATERIAL PURCHASED FOR THE CONTRACT INCLUDING THE RESIDUAL INVENTORY.			
a. Does the contractor's system provide for accurate cost accumulation and assignment to cost accounts in a manner consistent with the budgets using recognized acceptable costing techniques?			
b. Are material costs reported within the same period as that in which BCWP is earned for that material?			
c. Does the contractor's system provide for determination of price variance by comparing planned vs actual commitments?			
d. Is cost performance measurement at the point in time most suitable for the category of material involved, but no earlier than the time of actual receipt of material?			
e. Does the contractor's system provide for the determination of cost variances attributable to the excess usage of material?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
f. Does the contractor's system provide unit or lot costs when applicable?			
g. Are records maintained to show full accountability for all material purchased for the contract, including the residual inventory?			
IV. ANALYSIS			
1. IDENTIFY AT THE COST ACCOUNT LEVEL ON A MONTHLY BASIS USING DATA FROM, OR RECONCILABLE WITH, THE ACCOUNTING SYSTEM; BCWS AND BCWP; BCWP AND APPLIED (ACTUAL WHERE APPROPRIATE) DIRECT COSTS FOR THE SAME WORK; VARIANCES RESULTING FROM THE ABOVE COMPARISONS CLASSIFIED IN TERMS OF LABOR, MATERIAL, OR OTHER APPROPRIATE ELEMENTS, TOGETHER WITH THE REASONS FOR SIGNIFICANT VARIANCES.			
a. Does the contractor's system include procedures for measuring performance of the lowest level organization reponsible for the cost account? (Provide typical example.)			
b. Does the contractor's system include procedures for measuring the performance of critical subcontractors?			
c. Is cost and schedule performance measurement done in a consistent, systematic manner?			
d. Are the actual costs used for variance analysis reconcilable with data from the accounting system?			
e. Is budgeted cost for work performed calculated in a manner consistent with the way work is planned? (For example, work is planned on a measured basis, is budgeted cost for work performed calculated on a measured basis using the same rates and values ?)			
f. Does the contractor have variance analysis procedures and a demonstrated capability for identifying (at the cost account and other appropriate levels) cost and schedule variances resulting from the system (provide examples) which-			
(1) Identify and isolate causes of favorable and unfavorable cost and schedule variances?			
(2) Evaluate the impact of schedule changes, workaround, etc.?			
(3) Evaluate the performance of operating organizations?			
(4) Identify potential or actual overruns and underruns?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
2. IDENTIFY ON A MONTHLY BASIS, IN THE DETAIL NEEDED BY MANAGEMENT FOR EFFECTIVE CONTROL, BUDGETED INDIRECT COSTS, ACTUAL INDIRECT COSTS, AND VARIANCES, ALONG WITH THE REASONS. (Reference format 7.)			
a. Are the variances between budgeted and actual indirect costs identified and analyzed at the level of assigned responsibility for their control (indirect pool, department, etc.)?			
b. Does the contractor's cost control system provide for capability to identify the existence and causes of cost variances resulting from--			
(1) Incurrence of actual indirect costs in excess of budgets, by element of expense?			
(2) Changes in the direct base to which overhead costs are allocated?			
c. Are management actions taken to reduce indirect costs when there are significant adverse variances?			
3. SUMMARIZE THE DATA ELEMENTS AND ASSOCIATED VARIANCES LISTED IN ITEMS 1 AND 2 ABOVE THROUGH THE CONTRACTOR ORGANIZATION AND WBS TO THE REPORTING LEVEL SPECIFIED IN THE CONTRACT. (Reference formats 2, 3, 4, 5.)			
a. Are data elements (BCWS, BCWP, and ACWP) progressively summarized from the detail level to the contract level through the CWBS? (Provide exhibit.)			
b. Are data elements summarized through the functional organizational structure for progressively higher levels of management? (Provide exhibit.)			
c. Are data elements reconcilable between internal summary reports and reports forwarded to the Government?			
d. Are procedures for variance analysis documented and consistently applied at the cost account level and selected WBS and organizational levels at least monthly as a routine task? (Provide examples.)			
4. IDENTIFY ON A MONTHLY BASIS SIGNIFICANT DIFFERENCES BETWEEN PLANNED AND ACTUAL SCHEDULE ACCOMPLISHMENT TOGETHER WITH THE REASONS.			
a. Does the scheduling system identify in a timely manner the status of work? (Provide representative examples.)			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
b. Does the contractor use objective results, design reviews, and tests to trace schedule performance? (Provide examples.)			
5 IDENTIFY MANAGERIAL ACTIONS TAKEN AS A RESULT OF CRITERIA ITEMS 1 THROUGH 4 ABOVE			
a. Are data disseminated to the contractor's managers timely, accurate, and usable? (Provide examples.)			
b. Are data being used by managers in an effective manner to ascertain program or functional status, to identify reasons for significant variance, and to initiate appropriate corrective action? (Provide examples.)			
c. Are there procedures for monitoring action items and corrective actions to the point of resolution and are these procedures being followed?			
6 BASED ON PERFORMANCE TO DATE, ON COMMITMENT VALUES FOR MATERIAL, AND ON ESTIMATES OF FUTURE CONDITIONS, DEVELOP REVISED ESTIMATES OF COST AT COMPLETION FOR WBS ELEMENTS IDENTIFIED IN THE CONTRACT AND COMPARE THESE WITH THE CONTRACT BUDGET BASE AND THE LATEST STATEMENT OF FUNDS REQUIREMENTS REPORT TO THE GOVERNMENT. (Reference formats 2, 3, 4, 5, 10, and 11.)			
a. Are estimates of costs at completion based on-			
(1) Performance to date and material commitment?			
(2) Actual costs to date?			
(3) Knowledgeable projections of future performance?			
(4) Estimates of the cost for contract work remaining to be accomplished considering economic escalation?			
b. Are the overhead rates used to develop the contract cost estimate to complete based on-			
(1) Historical experience?			
(2) Contemplated management improvements?			
(3) Projected economic escalation?			
(4) The anticipated business volume?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
c. Are estimates of cost at completion generated with sufficient frequency to provide identification of future cost problems in time for possible corrective or preventive actions by both the contractor and the Government program manager?			
d. Are estimates developed by program personnel coordinated with those responsible for overall plant management to determine whether required resources will be available according to revised planning?			
e. Are estimates of cost at completion generated by knowledgeable personnel for the following levels:			
(1) Cost accounts?			
(2) Major functional areas of contract effort?			
(3) Major subcontracts?			
(4) WBS elements contractually specified for reporting of status to the Government (lowest level only)?			
(5) Total contract (all authorized work)?			
f. Are the latest revised estimates of costs at completion compared with the established budgets at appropriate levels and causes of variances identified?			
g. Are estimates of costs at completion generated in a rational, consistent manner? Are procedures established for appropriate aspects of generating estimates of costs at completion?			
h. Are estimates of costs at completion utilized in determining contract funding requirements and reporting them to the Government?			
i. Are the contractor's estimates of costs at completion reconcilable with cost data reported to the Government?			
V. REVISIONS AND ACCESS TO DATA			
1. INCORPORATE CONTRACTUAL CHANGES IN A TIMELY MANNER, RECORDING THE EFFECTS OF SUCH CHANGES IN BUDGETS AND SCHEDULES. IN THE DIRECTED EFFORT BEFORE NEGOTIATION OF A CHANGE, BASE SUCH REVISIONS ON THE AMOUNT ESTIMATED AND BUDGETED TO THE FUNCTIONAL ORGANIZATIONS.			
a. Are authorized changes being incorporated in a timely manner?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
b. Are all affected work authorizations, budgeting, and scheduling documents amended to properly reflect the effects of authorized changes? (Provide examples.)			
c. Are internal budgets for authorized, but not priced changes based on the contractor's resource plan for accomplishing the work?			
d. If current budgets for authorized changes do not sum to the negotiated cost for the changes, does the contractor compensate for the differences by revising the undistributed budgets, management reserves, budgets established for work not yet started, or by a combination of these?			
2. RECONCILE ORIGINAL BUDGETS FOR THOSE ELEMENTS OF THE WBS IDENTIFIED AS PRICED LINE ITEMS IN THE CONTRACT, AND FOR THOSE ELEMENTS AT THE LOWEST LEVEL OF THE DOD PROJECT SUMMARY WBS, WITH CURRENT PERFORMANCE MEASUREMENT BUDGETS IN TERMS OF CHANGES TO THE AUTHORIZED WORK AND INTERNAL REPLANNING IN THE DETAIL NEEDED BY MANAGEMENT FOR EFFECTIVE CONTROL. (Reference formats 8 and 9.)			
a. Are current budgets resulting from changes to the authorized work and/or internal replanning, reconcilable to original budgets for specified reporting items?			
3. PROHIBIT RETROACTIVE CHANGES TO RECORDS PERTAINING TO WORK PERFORMED THAT WILL CHANGE PREVIOUSLY REPORTED AMOUNTS FOR DIRECT COSTS, INDIRECT COSTS, OR BUDGETS, EXCEPT FOR CORRECTION OF ERRORS AND ROUTINE ACCOUNTING ADJUSTMENTS.			
a. Are retroactive changes to direct costs and indirect costs prohibited except for the correction of errors and routine accounting adjustments?			
b. Are direct or indirect cost adjustments being accomplished according to accounting procedures acceptable to DCAA?			
c. Are retroactive changes to BCWS and BCWP prohibited except for correction of errors or for normal accounting adjustments?			
4. PREVENT REVISIONS TO THE CONTRACT BUDGET BASE EXCEPT FOR GOVERNMENT-DIRECTED CHANGES TO CONTRACTUAL EFFORT.			
a. Are procedures established to prevent changes to the contract budget base (see definition) other than those authorized by contractual action?			

Appendix E-continued

CHECKLIST ITEMS	YES	NO	REMARKS
b. Is authorization of budgets in excess of the contract budget base controlled formally and done with the full knowledge and recognition of the procuring activity? Are the procedures adequate?			
5. DOCUMENT, INTERNALLY, CHANGES TO THE PERFORMANCE MEASUREMENT BASELINE AND, ON A TIMELY BASIS, NOTIFY THE PROCURING ACTIVITY THROUGH PRESCRIBED PROCEDURES.			
a. Are changes to the performance measurement baseline made as a result of contractual redirection, formal reprogramming, internal replanninng, application of undistributed budget, or the use of management reserve, properly documented and reflected in the Cost Performance Report?			
b. Are procedures in existence that restrict changes to budgets for open work packages, and are these procedures adhered to?			
c. Are retroactive changes to budgets for completed work specifically prohibited in an established procedure, and is this procedure adhered to?			
d. Are procedures in existence that control replanning of unopened work packages, and are these procedures adhered to?			
6. PROVIDE THE CONTRACTING OFFICER AND DULY AUTHORIZED REPRESENTATIVES ACCESS TO ALL OF THE FOREGOING INFORMATION AND SUPPORTING DOCUMENTS.			
a. Does the contractor provide access to all pertinent records to the C/SCSC Review Team and surveillance personnel?			

APPENDIX F

C/SCSC REVIEW WORKSHEETS AND EXHIBITS

1. Instruction for Selected Exhibits.

a. Responsibility Assignment Matrix. With the contractor's extended work breakdown structure on one axis and the contractor's organization down to the cost account manager's organization on the other axis, all levels of the organization should be shown. A dollarized matrix is preferred where dollars are identified at each level of the horizontal and vertical axis. (Reference criteria checklist item I-5). It is advisable that this be accomplished during the readiness assessment and updated accordingly during the demonstration review.

b. Schedule Trace. This involves identifying a master schedule, various levels of intermediate schedules (if any) and detail schedules down to the work package level. Interdependencies should be identified. Live data will be used. (Reference criteria checklist items II-1).

c. Material Flow. This identifies: (1) the authorizing, requisitioning, and purchasing cycle, (2) the receipt, storage and issue cycle, and (3) the accounting cycle. The determination point of BCWS, BCWP, and ACWP will be highlighted along with price and usage variance, variance analysis, and EAC. Actual documents should be used. (Reference criteria checklist items II-4, III-6, and III-7.)

2 . Worksheet Formats.

a. Typical Formats. On the following pages are typical formats for performing data reconciliations and evaluating cost account and work package characteristics. It is recognized that the formats may require modification to meet the requirements of different organizations and contract work breakdown structures. The team members assigned responsibilities applicable to these formats should include them as exhibits in the review report. Worksheets needed to develop the data arrayed on the formats should be developed in conjunction with the contractor. Contractor internal reports may replace formats and exhibits wherever possible.

b. Accomplishment of the Formats. The following must be considered:

(1) Formats should include effort which has significant portions of measured effort (including material work packages, if separate), apportioned (factored) effort, and LOE.

(2) Data must be evaluated for consistent application of standards or targets, planned ratios and bases, factors, rates, and methods.

(3) Accomplishment indicators (for example, realization factors, milestones) must be consistent for computing BCWP.

(4) Derivation of the data elements used in the sample formats must be substantiated.

(5) The selected CWBS level should be interpreted as the lowest CWBS element on which the selected cost account is based. (Formats 2, 3, 4, and 8.)

c. Instructions and Definitions. Formats listed below should be accomplished using the instructions and definitions appearing thereon:

(1) Subsystem Integration Major Organization (for example, Engineering) and Associated Documentation.

(2) Reconciliation of Internal Data--Cost Account Data.

(3) Reconciliation of Internal Data--CWBS Data.

(4) Reconciliation of Internal Data--Organization Data.

(5) Reconciliation of Internal Data--Summary Level Data.

(6) Evaluation of Cost Accounts/Work Packages

(7) Contractor Indirect Cost Evaluation.

(8) Performance Measurement Baseline Change Traceability--Cost Account Level.

(9) Reconciliation of Internal Data (Budget Revision)-- at Total Contract Level.

(10) Reconciliation of External Reports to Internal Data (CWBS).

(11) Reconciliation of External Reports to Internal Data (Major Internal Organizations).

(12) Reconciliation of External Reports.

SUBSYSTEM INTEGRATION
MAJOR ORGANIZATION (FOR EXAMPLE: ENGINEERING) AND ASSOCIATED DOCUMENTATION
SAMPLE FORMAT 1

CWBS LEVEL	ORGANIZATION LEVEL	SCHEDULING	BUDGETING	WORK AUTHORIZATION	PERFORMANCE MEASUREMENT
(1) CONTRACT	(2)	(3)	(4)	(5)	(6)
	NOTES:				
	1. Column 1 - Identify a representative element (name & number) for each level of the CWBS from the total contract level to the cost account and work package level.				
	2. Column 2 - Where applicable, identify a representative responsible/performing element by name and/or number for each level of the organization from the corporate/division level to the cost account and work package level.				
	3. Columns 3, 4, 5, and 6 - Identify the appropriate document title associated with the column heading for each CWBS level (column 1) and internal organization level (column 2).				
	4. Prepare format for each major organization or subdivision that differs.				
	5. There need not be a different type of document used for each CWBS and organization level.				
	6. Reference criteria checklist item I-3.				
COST ACCOUNT					
WORK PACKAGE					

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RECONCILIATION OF INTERNAL DATA
COST ACCOUNT DATA
SAMPLE FORMAT 2

COST ACCOUNT / ORGANIZATION / WORK PACKAGE / PLANNING PACKAGE	TOTAL BUDGET	AS APPLICABLE (CUMULATIVE TO DATE DATA)																							
		LABOR - HOURS				LABOR $				MATERIAL $				ODC $				OVERHEAD $				TOTAL $			
		BCWS	BCWP	ACWP	EAC	BCWS	BCWP	ACWP	EAC	BCWS	BCWP	ACWP	EAC	BCWS	BCWP	ACWP	EAC	BCWS	BCWP	ACWP	EAC	BCWS	BCWP	ACWP	EAC
CA Name / No. ORG. Name / No. WP/PP No.																									
SELECTED COST ACCOUNT TOTAL																									

NOTES:

1. Overhead $ need not be at work package or cost account level. Include these $ at the level where contractor allocates them.
2. Summarization to contract level continues on sample formats 3, 4, 5.
3. ACWP and EAC need not be at the work package level.
4. A separate format will be prepared for each trace element selected.
5. The contractor's internal reports may be used wherever possible provided they contain all the required data.
6. Reference criteria checklist items II-3, II-4, II-6, IV-3, and IV-5.

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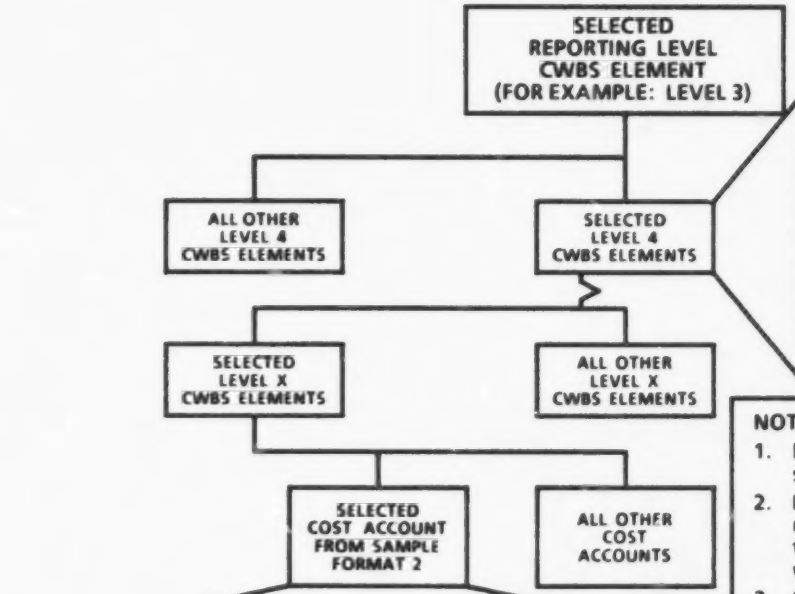
RECONCILIATION OF INTERNAL DATA
CWBS DATA
SAMPLE FORMAT 3


SELECTED REPORTING LEVEL CWBS ELEMENT (FOR EXAMPLE: LEVEL 3)
ALL OTHER LEVEL 4 CWBS ELEMENTS
SELECTED LEVEL 4 CWBS ELEMENTS
SELECTED LEVEL X CWBS ELEMENTS
ALL OTHER LEVEL X CWBS ELEMENTS
SELECTED COST ACCOUNT FROM SAMPLE FORMAT 2
ALL OTHER COST ACCOUNTS

COST ELEMENT	TO DATE			BAC	EAC
	BCWS	BCWP	ACWP		
LABOR - HOURS					
LABOR $					
MATERIAL $					
ODC $					
OVERHEAD $					
TOTAL $					

AS APPLICABLE

COST ELEMENT	TO DATE			BAC	EAC
	BCWS	BCWP	ACWP		
LABOR - HOURS					
LABOR $					
MATERIAL $					
ODC $					
OVERHEAD $					
TOTAL $					

NOTES:

1. Reconcile total budget, BCWS, BCWP, and ACWP for data sample cost accounts to successively higher CWBS levels.
2. In summarizing to higher levels, various cost elements may need to be added. Overhead costs need not be at the cost account level. Include these costs at the level where the contractor allocates them to CWBS.
3. Selected cost account should be the same as selected for the organizational summarization (Format 4).
4. The contractor's internal reports may be used wherever possible provided they contain all the required data.
5. If the contractor's system does not routinely summarize the estimate of cost at completion (EAC) by element of cost, (e.g. labor hours, labor cost, material cost, other direct cost, overhead cost), through higher levels of reporting, only the total line in each EAC column on the format is required to be filled in for levels above the selected cost account.
6. Reference criteria checklist items II-4, II-11, III-2, IV-3, and IV-6.

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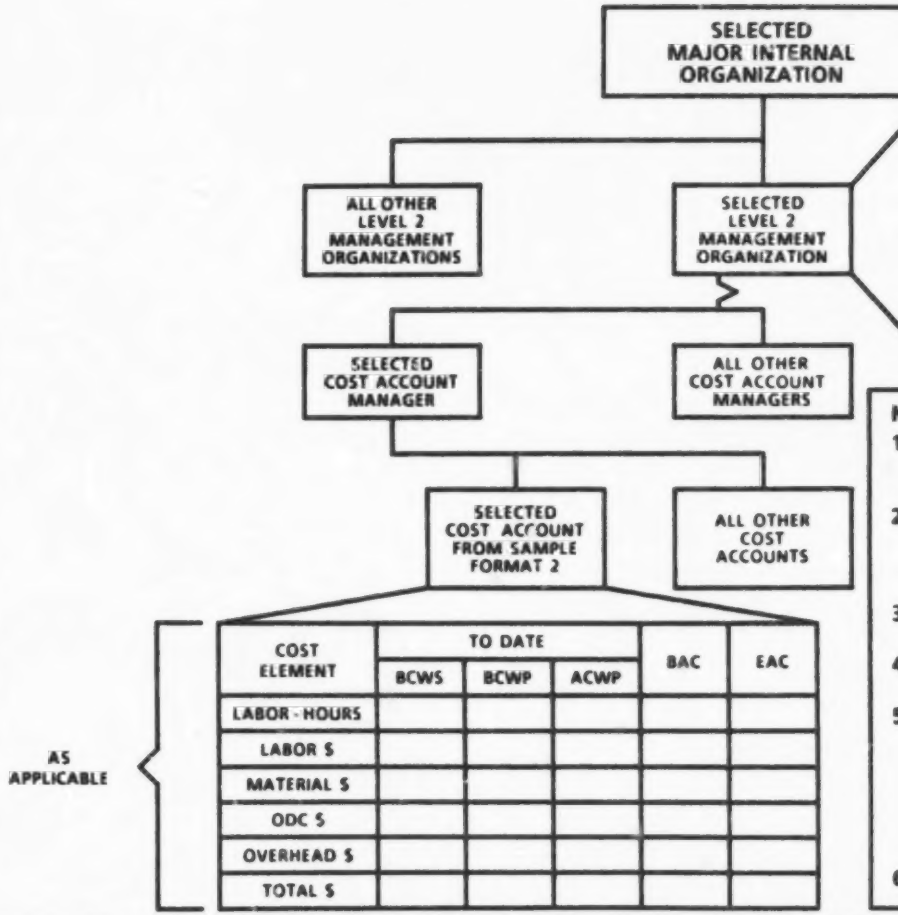
RECONCILIATION OF INTERNAL DATA
ORGANIZATION DATA
SAMPLE FORMAT 4


SELECTED MAJOR INTERNAL ORGANIZATION
ALL OTHER LEVEL 2 MANAGEMENT ORGANIZATIONS
SELECTED LEVEL 2 MANAGEMENT ORGANIZATION
SELECTED COST ACCOUNT MANAGER
ALL OTHER COST ACCOUNT MANAGERS
SELECTED COST ACCOUNT FROM SAMPLE FORMAT 2
ALL OTHER COST ACCOUNTS

COST ELEMENT	TO DATE			BAC	EAC
	BCWS	BCWP	ACWP		
LABOR - HOURS					
LABOR $					
MATERIAL $					
ODC $					
OVERHEAD $					
TOTAL $					

AS APPLICABLE

COST ELEMENT	TO DATE			BAC	EAC
	BCWS	BCWP	ACWP		
LABOR - HOURS					
LABOR $					
MATERIAL $					
ODC $					
OVERHEAD $					
TOTAL $					

NOTES:

1. Reconcile total budget, BCWS, BCWP, and ACWP for data sample cost accounts to successively higher organizational levels.
2. In summarizing to higher levels, various levels may need to be added. Overhead costs need not be at the cost account level. Include these costs at the level where the contractor allocates them to organizations.
3. Selected cost account should be the same as selected for WBS summarization (Format 3).
4. The contractor's internal reports may be used wherever possible provided they contain all the required data.
5. If the contractor's system does not routinely summarize the estimate of cost at completion (EAC) by element of cost, (e.g. labor hours, labor cost, material cost, other direct cost, overhead cost), through higher levels of reporting, only the total line in each EAC column on the format is required to be filled in for levels above the selected cost account.
6. Reference criteria checklist items II-4, II-11, III-3, and IV-6.

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RECONCILIATION OF INTERNAL DATA
SUMMARY LEVEL DATA
SAMPLE FORMAT 5

MAJOR INTERNAL ORGANIZATIONS	DATA ELEMENT	REPORTING LEVEL CWBS ELEMENTS															
		CWBS ELEMENT _____					CWBS ELEMENT _____					TOTAL					
		CUMULATIVE					CUMULATIVE					CUMULATIVE					
		BCWS	BCWP	ACWP	BAC	EAC	BCWS	BCWP	ACWP	BAC	EAC	BCWS	BCWP	ACWP	BAC	EAC
ENG	LABOR																
	MATERIAL																
	ODC																
	OVERHEAD																
	TOTAL																
MFG	LABOR																
	MATERIAL																
	ODC																
	OVERHEAD																
	TOTAL																
OTHER	LABOR																
	MATERIAL																
	ODC																
	OVERHEAD																
	TOTAL																
SUBTOTAL	LABOR																
	MATERIAL																
	ODC																
	OVERHEAD																
	TOTAL																
OVERHEAD NOT INCLUDED IN ABOVE																	
COST OF MONEY																	
G&A																	
UNDISTRIBUTED BUDGET																	
SUBTOTAL																	
MANAGEMENT RESERVE																	
TOTAL																	

NOTES:

1. Accomplish at summary WBS levels and undistributed budget.
2. Management reserve - identify and add to internal budgets to reconcile to negotiated contract cost.
3. Discrepancies - document, identify levels where occurred, and dollar amount; include cause if known.
4. One of the reporting level CWBS elements and major internal organizations will correlate to formats 3 and 4, respectively.
5. The contractor's internal reports may be used wherever possible provided they contain all the required data.
6. If the contractor's system does not routinely summarize the estimate of cost at completion (EAC) by element of cost (i. e. labor cost, material cost, other direct cost, overhead cost) to higher levels of reporting, only the total line of each EAC column on the format is required to be completed.
7. Accomplish at level 2 or lower level.
8. Reference criteria checklist items II-11, IV-3, and IV-6.

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EVALUATION OF COST ACCOUNTS/WORK PACKAGES
SAMPLE FORMAT 6

COST ACCOUNTS TOTAL	NUMBER	LONGEST CA	SHORTEST CA	MEAN DURATION	MEDIAN DURATION	TOTAL VALUE	LARGEST CA	SMALLEST CA	MEAN VALUE	MEDIAN VALUE
MEASURED										
APPORTIONED										
LEVEL OF EFFORT										
TOTAL										
WORK PACKAGES **TYPE OF MEASUREMENT**	**NUMBER**	**LONGEST WP**	**SHORTEST WP**	**MEAN DURATION**	**MEDIAN DURATION**	**TOTAL VALUE**	**LARGEST WP**	**SMALLEST WP**	**MEAN VALUE**	**MEDIAN VALUE**
MILESTONED										
OBJECTIVE INDICATORS										
EARNED UNITS										
50 - 50										
OTHER										
PLANNING PACKAGES										
TOTAL										

NOTES:

1. Use data from total contract or a representative sample (basis of sample should be explained).
2. Under type of measurement, list all methods used by the contractor to measure work package performance.
3. Reference criteria checklist items II-5 and II-8.

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CONTRACT INDIRECT COST EVALUATION
SAMPLE FORMAT 7

TYPE OF OVERHEAD POOL	DATA ELEMENT	MAJOR ORGANIZATIONS					
		ENGINEERING	FACTORY	TOOLING	LOGISTICS	ETC.	SUBTOTAL
MANUFACTURING	BUDGET (TOTAL) BUDGET TO DATE ACTUALS TO DATE DIFFERENCE						
ENGINEERING	BUDGET (TOTAL) BUDGET TO DATE ACTUALS TO DATE DIFFERENCE						
MATERIAL	BUDGET (TOTAL) BUDGET TO DATE ACTUALS TO DATE DIFFERENCE						
OTHER	BUDGET (TOTAL) BUDGET TO DATE ACTUALS TO DATE						
TOTAL	BUDGET (TOTAL) BUDGET TO DATE ACTUALS TO DATE DIFFERENCE						

NOTES:

1. Format illustrates overhead planning budget to date, and actuals to date, by overhead pool and associated organization allocation base.
2. Data to accomplish this format should be derived from the lowest level at which contract indirect costs are planned and allocated to organizations.
3. Analyze differences on supporting worksheets.
4. Reference criteria checklist items II-9 and IV-2.

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PERFORMANCE MEASUREMENT BASELINE CHANGE TRACEABILITY
COST ACCOUNT LEVEL
SAMPLE FORMAT 8

COST ACCOUNT NUMBER	ORIGINAL BUDGET	SOURCE AND AMOUNT OF CHANGES (AS APPLICABLE)				SUBTOTAL (2,3, 4, 5, & 6)	CURRENT BUDGET	DIFFERENCE (8 MINUS 7)	EXPLANATION OF DIFFERENCE
		CONTRACT CHANGE	HIGHER LEVEL CWBS	UNDIS BUDGET	MGMT RESERVE				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CWBS ELEMENT SUBTOTAL									

NOTES:

1. For the selected CWBS element format reconciles current cost account budget to original budgets for baseline control. (Refer to contractor internal control logs.)
2. Analyze differences on supporting worksheets.
3. Reference criteria checklist items II-3 and V-2.

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RECONCILIATION OF INTERNAL DATA (BUDGET REVISION)
AT TOTAL CONTRACT LEVEL
SAMPLE FORMAT 9

	ORIGINAL BUDGET	SOURCE AND AMOUNT OF CHANGES (AS APPLICABLE)				SUBTOTAL 2,3, 4, 5, & 6	CURRENT BUDGET	DIFFERENCE (8 MINUS 7)	EXPLANATION OF DIFFERENCE
		CONTRACT CHANGE	HIGHER LEVEL CWBS	UNDIS BUDGET	MGMT RESERVE				
(1) TOTAL OF ALL COST ACCOUNTS	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TOTAL OF HIGHER LEVEL CWBS ELEMENTS NOT BROKEN DOWN TO COST ACCOUNTS									
OVERHEAD NOT INCLUDED IN ABOVE									
COST OF MONEY									
G&A									
UNDISTRIBUTED BUDGET									
PERFORMANCE MEASUREMENT BASELINE									
MANAGEMENT RESERVE									
TOTAL ALLOCATED BUDGET									

NOTES:

1. Reconcile current contract budgets to original budgets and compare values to contract target cost. (Refer to contractor internal control logs.)
2. Analyze differences on supporting worksheets.
3. Reference criteria checklist item V-2.

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RECONCILIATION OF EXTERNAL REPORTS TO INTERNAL DATA (CWBS)
SAMPLE FORMAT 10

CWBS	DATA ELEMENTS							
	CURRENT PERIOD			CUMULATIVE TO DATE			BAC	EAC
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP		
AIR VEHICLE COST PERFORMANCE REPORT (FORMAT # 1)								
CONTRACTOR INTERNAL REPORT (SPECIFY)								
DIFFERENCE								
TEST COST PERFORMANCE REPORT								
CONTRACTOR INTERNAL REPORT (SPECIFY)								
DIFFERENCE								
SYSTEM ENGINEERING COST PERFORMANCE REPORT								
OTHER								
TOTAL CWBS ELEMENTS COST PERFORMANCE REPORT								
CONTRACTOR INTERNAL REPORT								
DIFFERENCE								

NOTES:

1. Reports to be compared should cover identical periods.
2. Items shown in the first column are for illustrative purposes. Use applicable WBS reporting level items.
3. Analyze differences on a separate worksheet, trace each difference to its origin, and explain.
4. Reference criteria checklist items IV-3 and IV-6.

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RECONCILIATION OF EXTERNAL REPORTS TO INTERNAL DATA
(MAJOR INTERNAL ORGANIZATIONS)
SAMPLE FORMAT 11

MAJOR INTERNAL ORGANIZATION	DATA ELEMENTS							
	CURRENT PERIOD			CUMULATIVE TO DATE			BAC	EAC
	BCWS	BCWP	ACWP	BCWS	BCWP	ACWP		
ENGINEERING COST PERFORMANCE REPORT (FORMAT # 2)								
CONTRACTOR INTERNAL REPORT (SPECIFY)								
DIFFERENCE								
MANUFACTURING COST PERFORMANCE REPORT								
CONTRACTOR INTERNAL REPORT (SPECIFY)								
DIFFERENCE								
OTHER COST PERFORMANCE REPORT								
CONTRACTOR INTERNAL REPORT (SPECIFY)								
TOTAL COST PERFORMANCE REPORT								
CONTRACTOR INTERNAL REPORT								
DIFFERENCE								

NOTES:

1. Reports to be compared should cover identical periods.
2. Items shown in the first column are illustrative. Use applicable contractor organizational structure.
3. Analyze differences on a separate worksheet, trace each difference to its origin, and explain.
4. Reference criteria checklist items IV-3 and IV-5.

AFSC/AFCC/AFLC-P173.5 AMC-P 715-5 NAVSO-P3627 DLAH 8400.2 DCAA-P7641.47

RECONCILIATION OF EXTERNAL REPORTS
SAMPLE FORMAT 12

REPORT	DATE OF REPORT	ESTIMATED PRICE	ESTIMATED COST AT COMPLETION	EXPLANATION OF DIFFERENCES
COST PERFORMANCE REPORT				
DD FORM 1586, CONTRACT FUNDS STATUS REPORT (Col. 11g)				
DIFFERENCE				

NOTES:

1. Ascertain that reports conform to current contractual requirements. (Ensure the estimated price includes contractor fee sharing participation, when required.)
2. Reports to be compared should cover identical periods.
3. Analyze differences on a separate worksheet, trace each difference to its origin, and explain.
4. Reference criteria checklist item IV-6.

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GLOSSARY

The following acronyms or abbreviations appear within the C/SCSC Joint Implementation Guide:

ACO	Administrative Contracting Officer
ACWP	Actual Cost of Work Performed
AFCC	Air Force Communications Command
AFIT	Air Force Institute of Technology
AFLC	Air Force Logistics Command
AFPRO	Air Force Plant Representative Office
AFSC	Air Force Systems Command
ARPRO	Army Plant Representative Office
AMC	Army Materiel Command
ASN (S&L)	Assistant Secretary of the Navy (Shipbuilding & Logistics)
BAC	Budget at Completion
BCWP	Budgeted Cost for Work Performed
BCWS	Budgeted Cost for Work Scheduled
CA	Cost Account
CACO	Corporate Administrative Contracting Officer
CAO	Contract Administration Office
C/SCSC	Cost/Schedule Control Systems Criteria
C/SSR	Cost/Schedule Status Report
CWBS	Contract Work Breakdown Structure
DAB	Defense Acquisition Board
DCAA	Defense Contract Audit Agency
DCAS	Defense Contract Administration Services
DCASMA	Defense Contract Administration Services Management Area
DCASPRO	Defense Contract Administration Services Plant Representative Office
DCASR	Defense Contract Administration Services Region
DID	Data Item Description
DLA	Defense Logistics Area
EAC	Estimate at Completion
ESAR	Extended Subsequent Application Review
LOE	Level of Effort

Glossary - continued

MR	Management Reserve
NAVPRO	Navy Plant Representative Office
NAVSO	Navy Secretarial Office
PCO	Procuring Contracting Officer
PMB	Performance Measurement Baseline
PP	Planning Package
SAR	Subsequent Application Review
SSC	Standard Systems Command
SUPSHIP	Superintendent of Shipbuilding, Conversion, and Repair, USN
UB	Undistributed Budget
WBS	Work Breakdown Structure
WP	Work Package

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